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L3 STRUCTURE UPLOADED

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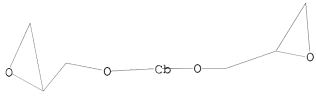

Structure attributes must be viewed using STN Express query preparation.

=> s l3 ful
FULL SEARCH INITIATED 16:05:28 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 31334 TO ITERATE

100.0% PROCESSED 31334 ITERATIONS 865 ANSWERS
SEARCH TIME: 00.00.01

L4 865 SEA SSS FUL L3

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COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION
FULL ESTIMATED COST 178.36 358.77

FILE 'CAPLUS' ENTERED AT 16:05:55 ON 21 DEC 2008
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FILE COVERS 1907 - 21 Dec 2008 VOL 149 ISS 26
FILE LAST UPDATED: 19 Dec 2008 (20081219/ED)

Caplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2008.

Effective October 17, 2005, revised CAS Information Use Policies apply.
They are available for your review at:

http://www.cas.org/legal/infopolicy.html

=> s l4
L5 749 L4

=> d 1-10 bib abs hitstr

L5 ANSWER 1 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1396495 CAPLUS
DN 149:535056
TI Sensitizer for cationic photoinitiators
IN Herlihy, Shaun Lawrence; Standing, Stephen Stuart; Davidson, Robert Stephen
PA Sun Chemical Limited, UK
SO PCT Int. Appl., 25pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2008139315	A2	20081120	WO 2008-IB1187	20080509
	W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	GB 2449124	A	20081112	GB 2007-9119	20070511
PRAI	GB 2007-9119	A	20070511		

AB Polycyclic aromatic compds. having at least two conjugated aromatic rings at least one of which has a substituent comprising a cyclic carbonate group can be used as sensitizers for cationic photoinitiators, especially iodonium compds., and may also function as monomers in cationically initiated radiation curable compns., especially coating compns., such as printing inks and varnishes. A sensitizer was prepared from EPICLON HP-4032D and carbon dioxide.

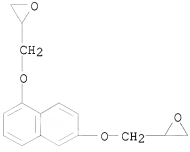
IT 131406-13-8, EPICLON HP-4032D 155665-67-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(sensitizer for cationic photoinitiators)

RN 131406-13-8 CAPLUS

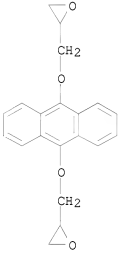
CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis-, homopolymer (CA INDEX NAME)

CM 1

CRN 27610-48-6
CMF C16 H16 O4



RN 155665-67-1 CAPLUS
CN Oxirane, 2,2'-[9,10-anthracenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



L5 ANSWER 2 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1366236 CAPLUS
DN 149:535499
TI Thermally conductive liquid epoxy resin underfill compositions, their sealing compositions, and flip-chip semiconductor devices sealed with them
IN Asano, Masatoshi
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 18pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	JP 2008274083	A	20081113	JP 2007-118717	20070427
PRAI	JP 2007-118717		20070427		

AB The compns. for underfills comprise (A) liquid epoxy resins, (B) curing agents, and (C) 60-90% (to total compns.) spherical alumina with average particle diameter 1-5 μm, maximum particle diameter ≤20 μm, and percentage of particles with diameter >10 μm <10%. Thus, a composition containing trifunctional epoxy resin (Epikote 630H), bisphenol F epoxy resin (RE 303SL), diethyldiaminodiphenylmethane (Kayahard A-A, curing agent), and spherical alumina (DAW 03) showed good flowability in gaps and no filler sedimentation after curing.

IT 1075432-39-1P 1075432-42-6P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thermally conductive liquid epoxy resin underfill compns. containing alumina with good flowability in gaps and no filler sedimentation after curing for flip-chip semiconductor devices)

RN 1075432-39-1 CAPLUS

CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis-, polymer with Epicure YH 307 and RE 303SL (CA INDEX NAME)

CM 1

CRN 312636-37-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

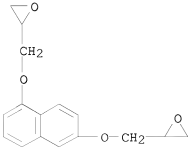
CM 2

CRN 125724-90-5
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 27610-48-6
CMF C16 H16 O4



RN 1075432-42-6 CAPLUS
CN 4,7-Ethenoisobenzofuran-1,3-dione, 3a,4,5,6,7,7a-hexahydro-4-methyl-7-(1-methylethyl)-, polymer with 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane], RE 303SL and 3a,4,7,7a-tetrahydro-4,5-dimethyl-7-(2-methyl-1-propen-1-yl)-1,3-isobenzofurandione (CA INDEX NAME)

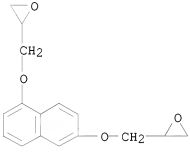
CM 1

CRN 312636-37-6
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

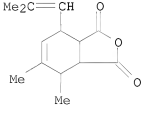
CM 2

CRN 27610-48-6
CMF C16 H16 O4



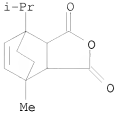
CM 3

CRN 7672-77-7
CMF C14 H18 O3



CM 4

CRN 3733-79-7
CMF C14 H18 O3



L5 ANSWER 3 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1358371 CAPLUS
DN 149:535029
TI Sensitizer for cationic photoinitiators
IN Herlihy, Shaun Lawrence; Davidson, Robert Stephen
PA Sun Chemical Limited, UK
SO Brit. UK Pat. Appl., 28pp.
CODEN: BAXXDU
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2449124	A	20081112	GB 2007-9119	20070511
	WO 2008139315	A2	20081120	WO 2008-IB1187	20080509
	W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	GB 2007-9119	A	20070511		

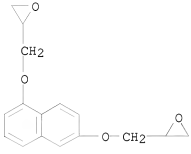
AB Polycyclic aromatic compds. having at least two conjugated aromatic rings at least one of which has a substituent comprising a cyclic carbonate group can be used as sensitizers for cationic photoinitiators, especially iodonium compds., and may also function as monomers in cationically initiated radiation curable compns., especially coating compns., such as printing inks and varnishes. A sensitizer was prepared from EPICLON HP-4032D and carbon dioxide.

IT 131406-13-8, EPICLON HP-4032D 155665-67-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(sensitizer for cationic photoinitiators)

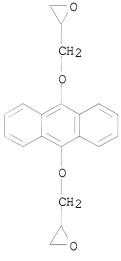
RN 131406-13-8 CAPLUS
CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis-, homopolymer (CA INDEX NAME)

CM 1

CRN 27610-48-6
CMF C16 H16 O4



RN 155665-67-1 CAPLUS
CN Oxirane, 2,2'-[9,10-anthracenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



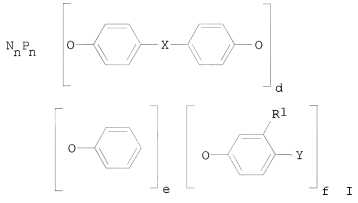
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1337427 CAPLUS
DN 149:514402
TI Fire-resistant liquid epoxy resin compositions and semiconductor devices sealed with them
IN Sumida, Kazumasa; Tomiyoshi, Kazutoshi
PA Shin-Etsu Chemical Industry Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 19pp.
CODEN: JKXXAF

DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2008266512	A	20081106	JP 2007-114142	20070424
PRAI	JP 2007-114142		20070424		

GI



AB Title Br compound- and Sb compound-free compns., useful for potting semiconductor devices, comprise (A) liquid epoxy resins, (B) curing agents, (C) inorg. fillers, (D) Zn molybdate supported by inorg. fillers, and (E) phosphazenes I [X = single bond, CH2, CMe2, SO2, S, O, O(CO)O; Y = OH, SH, NH2; R1 = C1-4 alkyl, alkoxy, NH2, NR2R3, SR2; R2, R3 = H, C1-4 alkyl; 0 ≤ d ≤0.25n; 0 ≤ e < 2n; 0 ≤ f ≤ 2n; 2d + e + f = 2n; n = 3-1000] at weight ratio (A + B) 100, C 400-800, D 5-40, E 5-40, and (D + E) 10-40 parts. Thus, a composition containing Epikote 630H (trifunctional epoxy resin) 20, HP 4032D (naphthalene-type epoxy resin) 20, YH 307 (acid anhydride) 30, MH 700 (acid anhydride) 30, fused SiO2 700, Kemgard 911C (Zn molybdate supported by talc) 15, and I (R1 = Me, Y = OH, n = 3, d, e = 0, f = 6) 15 parts was molded to give a test piece showing good fire and moisture resistance.

IT 1073593-93-7P, Epikote 630H-HP 4032D-MH 700-YH 307 copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(fire- and moisture-resistant liquid epoxy resin compns. for potting semiconductor devices)

RN 1073593-93-7 CAPLUS

CN 1,3-Isobenzofurandione, hexahydro-5-methyl-, polymer with Epicure YH 307, hexahydro-1,3-isobenzofurandione, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane] and N-[4-(2-oxiranylmethoxy)phenyl]-N-(2-oxiranylmethyl)-2-oxiranemethanamine (CA INDEX NAME)

CM 1

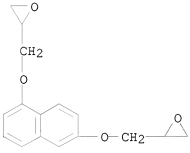
CRN 125724-90-5
CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 27610-48-6
CMF C16 H16 O4



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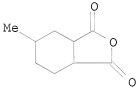
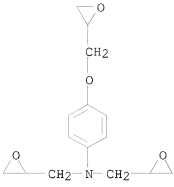
CRN 19438-60-9
CMF C9 H12 O3



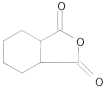
CM 4

CRN 5026-74-4
CMF C15 H19 N O4



CM 5

CRN 85-42-7
CMF C8 H10 O3



L5 ANSWER 5 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1310149 CAPLUS
DN 149:504194
TI Liquid epoxy resin composition for semiconductor device
IN Asano, Masatoshi
PA Shin-Etsu Chemical Co., Ltd., Japan
SO U.S. Pat. Appl. Publ., 10pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

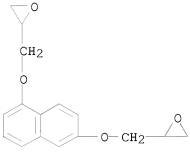
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20080265438	A1	20081030	US 2008-109163	20080424
	JP 2008274080	A	20081113	JP 2007-118607	20070427
PRAI	JP 2007-118607	A	20070427		

AB A liquid epoxy resin composition comprising (A) a liquid epoxy resin, (B) a curing agent, (C) an inorg. filler, (D) a hygroscopic agent, and optionally, (E) a fluxing agent has the advantages of void-free fill, shelf stability and solder connection, and is thus advantageously used in the fabrication of flip chip semiconductor devices by the no-flow method.
IT 131406-13-8, Epiclon HP4032D
RL: TEM (Technical or engineered material use); USES (Uses)
(liquid epoxy resin composition for semiconductor device)

RN 131406-13-8 CAPLUS
CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis-, homopolymer (CA INDEX NAME)

CM 1

CRN 27610-48-6
CMF C16 H16 O4



L5 ANSWER 6 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1301999 CAPLUS
DN 149:494690
TI Adhesives containing negative expansion coefficient-having fillers for electronic parts
IN Masahara, Kazuyuki
PA Sekisui Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2008260892	A	20081030	JP 2007-106157	20070413
PRAI JP 2007-106157		20070413		

AB Title adhesives contain (A) fillers with neg. expansion coefficient and (B) binders containing adhesive compds. Thus, 30 volume parts ZWP [Zr2(WO4)(PO4)2, expansion coefficient -3 ppm/°] was mixed with 100 volume parts binder containing G 2050M (epoxy-containing acrylic polymer), EXA 7200HH (dicyclopentadiene-type epoxy resin), HP 4032D (naphthalene-type epoxy resin), and YH 309 (acid anhydride), diluted with Me Et ketone, applied on a release film, and dried to give a sheet adhesive. A wafer was laminated on the sheet adhesive and heat-treated at 170° to give a test piece showing warpage 130 μm.
IT 1070965-90-0P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(adhesives containing neg. expansion coefficient-having fillers for bonding electronic parts with low warpage)
RN 1070965-90-0 CAPLUS
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with Epicure YH 309,

EXA 7200H, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane] and 2-oxiranylmethyl 2-methyl-2-propenoate (CA INDEX NAME)

CM 1

CRN 178234-45-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

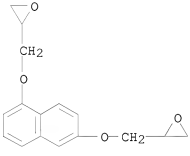
CM 2

CRN 125725-80-6
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 3

CRN 27610-48-6
CMF C16 H16 O4



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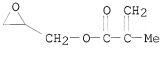
CRN 106-91-2
CMF C7 H10 O3



CM 5

CRN 80-62-6
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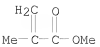


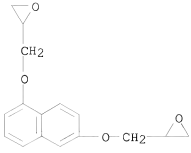
L5 ANSWER 7 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1279392 CAPLUS
DN 149:484525
TI Dielectric packaging films, electronic apparatuses therewith, and manufacture thereof
IN Maenaka, Hiroshi; Aoyama, Takuji; Watanabe, Takashi
PA Sekisui Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 21pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2008258429	A	20081023	JP 2007-99491	20070405
PRAI	JP 2007-99491		20070405		

AB The films contain curable compds., curing agents, high-mol.-weight polymers, and inorg. fillers, and satisfy storage modulus at 30° (E1) (1 + 104)-(1 + 106) Pa, that at ≥30° (E2) (1 + 102)-(3 + 104) Pa, and E1/E2 2-500. The curable compds. may be epoxy resins having polycyclic hydrocarbon skeleton. Electronic device manufacturing process as follows is also claimed; covering electronic device peripheries with the dielec. films, exposing the resulting layers to high-d. actinic rays, filling the resulting holes with wiring materials (A), and forming wiring patterns on the layer surface while interconnecting them with A. The films give uniformly covered finish to the electronic devices.
IT 131406-13-8, HP 4032D 154445-49-5, Epiclon HP 4700
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(easy-to-handle dielec. films containing polycyclic skeleton-containing epoxy resins and for electronic device packaging)
RN 131406-13-8 CAPLUS
CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis-, homopolymer (CA INDEX NAME)

CM 1

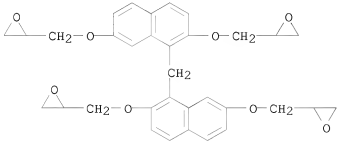
CRN 27610-48-6
CMF C16 H16 O4



RN 154445-49-5 CAPLUS
CN Oxirane, 2,2',2'',2'''-[methylenebis[1,2,7-naphthalenetriylbis(oxymethylene)]]tetrakis-, homopolymer (CA INDEX NAME)

CM 1

CRN 146794-56-1
CMF C33 H32 O8



L5 ANSWER 8 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1276755 CAPLUS
DN 149:472277
TI Thermosetting polyimide compositions with good heat resistance, electrical performance, mechanical properties, and dimensional stability
IN Ichinose, Hidetoshi; Ishida, Hideyuki; Murakami, Koichi
PA DIC Corporation, Japan
SO Jpn. Kokai Tokkyo Koho, 43pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2008255337	A	20081023	JP 2008-56267	20080306
PRAI	JP 2007-63318	A	20070313		

AB The thermosetting polyimide compns. contain (A) polyimides having structures NHCO2XO2CNH and/or OHXO2CNH (X = residue obtained by removing 2 phenolic OH from phenolic compds. having ≥2 phenolic OH), (B) epoxy resins, and (C) phenoxy resins, and optionally, (D) crosslinking catalysts

and (E) urethanization catalysts. Thus, reacting ethylene glycol bis(anhydrotrimellitate) 98.4, bisphenol S 40, diphenylmethane diisocyanate 40, and hexamethylene diisocyanate 26.9 g in dimethylacetamide (DMAC) at 80° then at 120° and diluting with DMAC gave a 55-solid polyimide solution with viscosity at 25° 100 Pa·s, 50 parts of which was mixed with Epiclon N 680 (cresol novolak epoxy resin), 25 parts Epiclon N 850-bisphenol S copolymer (phenoxy resin), 5 parts 2-ethyl-4-methylimidazole, and 5 parts dibutyltin acetate to give a thermosetting polyimide composition giving thermoset (200°) films on tin substrates showing permittivity ε 2.4, tanδ 7.5 + 100, and low coefficient of thermal expansion.

IT 952685-98-2P, Dihydroxynaphthalene-Epiclon HP 4032D copolymer
952686-01-0P, Bisphenol S-Epiclon HP 4032D copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(thermosetting polyimide compns. with good heat resistance, elec. performances, mech. properties, and dimensional stability)

RN 952685-98-2 CAPLUS

CN Naphthalenediol, polymer with 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane] (CA INDEX NAME)

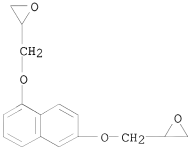
CM 1

CRN 28346-70-5
CMF C10 H8 O2
CCI IDS

2 (D1—OH)

CM 2

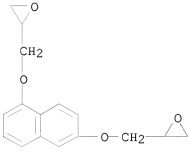
CRN 27610-48-6
CMF C16 H16 O4



RN 952686-01-0 CAPLUS
CN Phenol, 4,4'-sulfonylbis-, polymer with
2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane] (CA INDEX NAME)

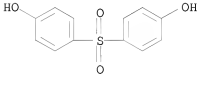
CM 1

CRN 27610-48-6
CMF C16 H16 O4



CM 2

CRN 80-09-1
CMF C12 H10 O4 S



L5 ANSWER 9 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2008:1247570 CAPLUS
DN 149:472255
TI Curatives for epoxy compositions
IN Dershem, Stephen
PA Designer Molecules, Inc., USA
SO PCT Int. Appl., 61pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2008124797	A1	20081016	WO 2008-US59804	20080409
	W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,				

ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH,
PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK,
TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

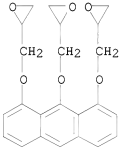
PRAI US 2007-922412P P 20070409
US 2007-930166P P 20070515

AB The invention provides epoxy and oxetane compns. including the acyloxy and N-acyl curing agents described herein. Use of invention curing agents result in cured adhesive compns. with remarkably increased adhesion and reduced hydrophilicity when compared to resins cured with other types of curing agents. Furthermore, the curatives of this invention do not interfere with free-radical cure and are thus suited for use in hybrid cure thermoset compns.

IT 186885-46-1
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(curatives for epoxy compns.)

RN 186885-46-1 CAPLUS

CN Oxirane, 2,2',2''-[1,8,9-anthracenetriyltris(oxymethylene)]tris- (9CI) (CA INDEX NAME)



RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 10 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2008:1247209 CAPLUS

DN 149:472253

TI Thermosetting polyurethane resin compositions with good heat resistance, electrical and mechanical properties, and dimensional stability

IN Ichinose, Hidetoshi; Ishida, Hideyuki; Murakami, Koichi

PA DIC Corporation, Japan

SO Jpn. Kokai Tokkyo Koho, 35pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI JP 2008248240 A 20081016 JP 2008-56266 20080306
PRAI JP 2007-57130 A 20070307
AB Title compns. comprise (A) polyurethane resins having repeating units of NHCO2XOCONH and/or HOXOCONH, (B) epoxy resins, and (C) phenoxy resins, wherein X = residue of phenolic compds. having ≥2 phenolic hydroxy groups. Thus, 0.4 mol bisphenol F and 0.3 mol TDI were polymerized in γ-butyrolactone at 80° for 5 h to give a 60%-solids polyurethane solution, 50 parts of which was mixed with a cresol novolak epoxy resin 25, a phenoxy resin obtained from Epiclon 850 and bisphenol S 25, 2-ethyl-4-methylimidazole 0.5, and dibutyltin acetate 0.5 parts to give a composition, which was applied on a substrate and cured at 200° for 1 min, showing dielec. constant 2.50, tan δ 7.8 + 102, glass transition temperature 195°, linear thermal expansion coefficient 65 ppm at 50-60° and 95 ppm at 110-120°, and good storage stability (composition).
IT 952685-98-2P 952686-01-0P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(blend with epoxy polyurethane; thermosetting polyurethane resin compns. with good heat resistance, elec. and mech. properties, and dimensional stability)
RN 952685-98-2 CAPLUS
CN Naphthalenediol, polymer with 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane] (CA INDEX NAME)

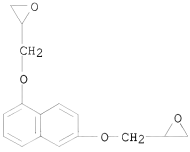
CM 1

CRN 28346-70-5
CMF C10 H8 O2
CCI IDS

2 (D1—OH)

CM 2

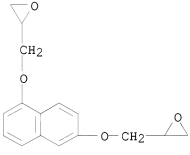
CRN 27610-48-6
CMF C16 H16 O4



RN 952686-01-0 CAPLUS
CN Phenol, 4,4'-sulfonylbis-, polymer with
2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane] (CA INDEX NAME)

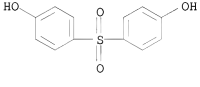
CM 1

CRN 27610-48-6
CMF C16 H16 O4



CM 2

CRN 80-09-1
CMF C12 H10 O4 S

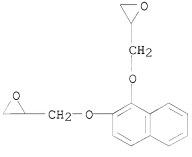


=> d 780-794 bib abs hitstr
749 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET SIZE
The answer numbers requested are not in the answer set.
ENTER ANSWER NUMBER OR RANGE (1):730-749

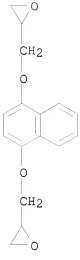
L5 ANSWER 730 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1977:585535 CAPLUS
DN 87:185535
OREF 87:29317a,29320a
TI Heat-resistant poly(vinyl chloride) compositions
IN Minagawa, Motonobu; Sekiguchi, Tetsuo; Tsuruga, Koji
PA Adeka Argus Chemical Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52078257	A	19770701	JP 1975-155621	19751225
	JP 59028228	B	19840711		
PRAI	JP 1975-155621	A	19751225		

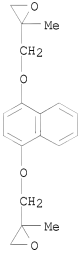
AB Heat-resistant PVC [9002-86-2] (optionally containing ABS [9003-56-9]) compns. contained 0.01-5 phr metal salt(s) and 0.01-5 phr polyol adduct with diglycidyl ether of catechol, resorcinol, hydroquinone, or naphthalenediol. Thus, a solution of 13.0 g pentaerythritol (I) [115-77-5] in 30 g water was treated with 0.3 g KOH, heated to 80°, heated with a solution of 11.6 g hydroquinone diglycidyl ether (II) [2425-01-6] in 30 g dioxane, and refluxed for 16 h to give 1:2 II-I adduct (III). A PVC composition containing DOP 50, zinc octoate [557-09-5] 1.0, barium nonylphenate [28987-17-9] 1.0, stearic acid 0.5, and III 0.5 phr had heat resistance (190°) 105 min, compared with 45 min for a control not containing III and 60 min for a control containing I in place of III.
IT 34899-05-3D, reaction products with mannitol 34899-13-3D , reaction products with polyols 64777-23-7D, reaction products with pentaerythritol
RL: USES (Uses)
(heat stabilizers containing metal salts and, for PVC)
RN 34899-05-3 CAPLUS
CN Oxirane, 2,2'-[1,2-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 34899-13-3 CAPLUS
CN Oxirane, 2,2'-[1,4-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)

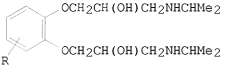


RN 64777-23-7 CAPLUS
CN Oxirane, 2,2'-[1,4-naphthalenediylbis(oxymethylene)]bis[2-methyl- (9CI)
(CA INDEX NAME)



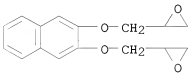
L5 ANSWER 731 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1977:545538 CAPLUS
DN 87:145538
OREF 87:22925a,22928a
TI β-Adrenoceptor studies. 2. Effects of alkyl substitution on
β-adrenoceptor blocking, antiarrhythmic, and local anesthetic
activities of 1,1'-(o-phenylenedioxy)bis(3-isopropylamino-2-propanol)
AU Zaagsma, Johan; Nauta, Wijbe T.
CS Dep. Med. Chem., Vrije Univ., Amsterdam, Neth.

SO Journal of Medicinal Chemistry (1977), 20(4), 527-31
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI



I

AB Four title compds. (I; R = 3- or 4-Me, 3- or 4-iso-Pr) and the naphthalene-2,3- analog and 5,6,7,8-tetrahydronaphthalene-2,3- analog [34898-94-7] were prepared by the reaction of the appropriate catechol with epichlorohydrin followed by amination. Compared to the parent compound (I, R = H), tracheal and right atrial β-adrenoceptor blocking activity were markedly decreased by substitution in position 3, while substitution in other positions lowered affinity to cardiac β-adrenoceptors, but only marginally affected potency on tracheal receptors. Antagonism to ouabain-induced arrhythmias and local anesthetic activity increased with aromatic substitution. All the drugs were cardiodepressant. Stepwise multiple regression anal. using partition coeffs., steric factors, dissociation consts., and substituent consts. were used to correlate substitution with biol. activity.
IT 34898-97-0P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with isopropylamine)
RN 34898-97-0 CAPLUS
CN Oxirane, 2,2'-[2,3-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)

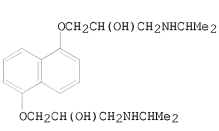


L5 ANSWER 732 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1977:121050 CAPLUS
DN 86:121050
OREF 86:19107a,19110a
TI Naphthylenebis(oxyalkylene) amino alcohols
IN Nauta, Wijbe T.
PA Neth.
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English

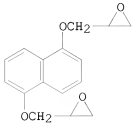
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3996284	A	19761207	US 1974-459721	19740410
PRAI	US 1971-127381	A2	19710323		

GI



I



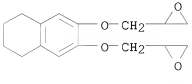
III

AB The title compds., e.g., I, useful as anesthetics and antiarrhythmics, were prepared via sequential reactions of naphthalenediols with epichlorohydrin (II) and amines. Thus, treating 1,8-naphthalenediol with II and NaOH gave III, which with Me2CHNH2 gave I.

IT 34898-93-6P 34898-97-0P 34899-01-9P
34899-05-3P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction with isopropylamine)

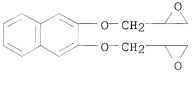
RN 34898-93-6 CAPLUS

CN Oxirane, 2,2'-[(5,6,7,8-tetrahydro-2,3-naphthalenediyl)bis(oxymethylene)]bis- (CA INDEX NAME)



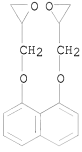
RN 34898-97-0 CAPLUS

CN Oxirane, 2,2'-[2,3-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)

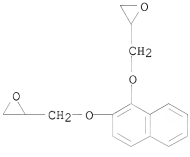


RN 34899-01-9 CAPLUS

CN Oxirane, 2,2'-[1,8-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)

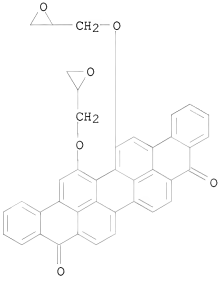


RN 34899-05-3 CAPLUS
CN Oxirane, 2,2'-[1,2-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



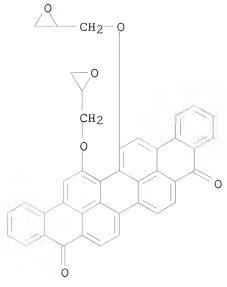
L5 ANSWER 733 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1975:74414 CAPLUS
DN 82:74414
OREF 82:11907a,11910a
TI Reactive vat dyes
AU Korotenko, T. A.; Rudkevich, M. I.
CS USSR
SO Vestnik Khar'kovskogo Politekhnicheskogo Instituta (1973), 76, 29-35
CODEN: VEPIBL; ISSN: 0453-7998
DT Journal
LA Ukrainian
GI For diagram(s), see printed CA Issue.
AB Ten reactive vat dyes (I-II) containing glycidyl (Q) groups were prepared by reaction of epichlorohydrin [106-89-8] with perylene and dibenzanthrone derivs. For example, reaction of I(R = H, R1 = OH) mono-Na salt [53683-12-8] with qH in the presence of piperidine-HCl gave I (H = H, R1 = OQ) [19586-90-4], which dyed cotton from a vat in fast green shades that changed to violet under the influence of HOAc. Also prepared were I (R = OQ, C6H4NH2-p, C6H4OQ-p, C6H4(C6H4OQ-p)-p, Q, C6H4NHQ-p; R1 = H, OQ), II (R= OQ, NHQ), and dibromobis(glycidyloxy)dibenzanthrone [

53701-14-7].
IT 53683-09-3 53701-14-7
RL: USES (Uses)
(reactive vat dye, for cotton)
RN 53683-09-3 CAPLUS
CN Anthra[9,1,2-cde]benzo[rst]pentaphene-5,10-dione,
16,17-bis(oxiranylmethoxy)- (9CI) (CA INDEX NAME)



RN 53701-14-7 CAPLUS
CN Anthra[9,1,2-cde]benzo[rst]pentaphene-5,10-dione,
dibromo-16,17-bis(oxiranylmethoxy)- (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 2-A

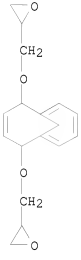
2 (D1—Br)

L5 ANSWER 734 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1975:31023 CAPLUS
DN 82:31023
OREF 82:4929a,4932a
TI 2-[2-Hydroxy-3-(aminopropyl)-1-yloxy]-1,6-difluoro-and-1,6-methano[10]annulenes and their salts
IN Nelson, Peter H.; Untch, Karl G.; Fried, John H.
PA Syntex Corp.
SO U.S., 16 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

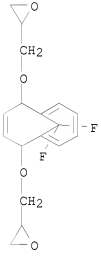
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3758583	A	19730911	US 1971-108611	19710121
PRAI US 1971-108611	A	19710121		

GI For diagram(s), see printed CA Issue.
AB 1,6-Methano-[10] annulene derivs. I (R = F, H; R1 = H, Me2CH, Me; R2 = Me3C, Me2CH, cyclohexyl) and their ring-substituted derivs. were useful as β-adrenergic blocking agents. Thus, 1,6-methano[10]annulene was refluxed with Pb(OAc)4 in C6H6 to give II (R = Ac), which reacted with glycidol to give II (R = glycidyl). KOCMe3 in glyme was added to II (R = glycidyl), and the product was treated with Me2CHNH2 to give I (R = R1 = H, R2 = Me2CH).
IT 53147-43-6P 53147-53-8P 53187-35-2P

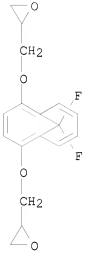
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 53147-43-6 CAPLUS
CN Oxirane, 2,2'-[bicyclo[4.4.1]undeca-3,6,8,10-tetraene-2,5-diylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



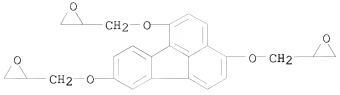
RN 53147-53-8 CAPLUS
CN Oxirane, 2,2'-[(11,11-difluorobicyclo[4.4.1]undeca-3,6,8,10-tetraene-2,5-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 53187-35-2 CAPLUS
CN Oxirane, 2,2'-[(11,11-difluorobicyclo[4.4.1]undeca-1,3,5,7,9-pentaene-2,5-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



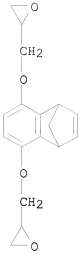
L5 ANSWER 735 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1974:554248 CAPLUS
DN 81:154248
OREF 81:24013a,24016a
TI Effect of hydroxy derivatives of fluoranthene on the stability of the bond in rubber-cord systems
AU Onishchenko, Z. V.; Krasnobryzhaya, R. A.; Blokh, G. A.; Kulik, A. P.; Shenbor, M. I.; Kutyanina, V. S.
CS Dnepropetr. Khim.-Tekhnol. Inst., Dnepropetrovsk, USSR
SO Voprosy Khimii i Khimicheskoi Tekhnologii (1973), 31, 44-9
CODEN: VKKCAJ; ISSN: 0321-4095
DT Journal
LA Russian
AB The adhesion of BSK and SKI-3 rubber to cord bonded with SKD-1 or DVMP-10kh adhesives increased following modification with 4,7,12-trihydroxyfluoranthene (I) [34163-42-3] or 4,7,12-tris(glycidyloxy)fluoranthene (II) [52767-58-5]. The effectiveness of the additives increased with increasing content of OH groups in the additives. II was superior to I in improving the adhesion of DMVP-10kh latex, particularly at elevated temperature
IT 52767-58-5
RL: USES (Uses)
(synthetic latexes modified by, for bonding of synthetic rubbers to fibers)
RN 52767-58-5 CAPLUS
CN Oxirane, 2,2',2''-[1,4,8-fluoranthenetriyltris(oxymethylene)]tris- (9CI) (CA INDEX NAME)



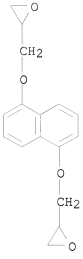
L5 ANSWER 736 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1974:505095 CAPLUS
DN 81:105095
OREF 81:16611a,16614a
TI 5,8-Dihydro-5,8-methanonaphthalenes with cardiovascular action
IN Marx, Michael; Li, Tsung-Tee
PA Syntex (U.S.A.) Inc.
SO Ger. Offen., 74 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI DE 2362877	A1	19740620	DE 1973-2362877	19731218
GB 1436860	A	19760526	GB 1973-57171	19731210
AU 7363543	A	19750612	AU 1973-63543	19731212
FR 2210412	A1	19740712	FR 1973-45105	19731217
JP 50046652	A	19750425	JP 1973-141738	19731217
PRAI US 1972-316070	A	19721218		

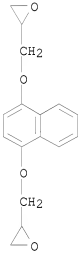
GI For diagram(s), see printed CA Issue.
AB Dihydro-methanonaphthalenes I (R = e.g., Me, Et, Me3C; R1 = e.g., MeS, AcO, CH2:CHCH2O, HO, CN) having cardiovascular activity (no data) were prepared from II (R = H) which reacted with epibromohydrin to give II (R = glycidyl), which reacted Me3CNH2 to give I (R = Me3C, R1 = OH). Reaction of this product with HCHO in EtOH, then with Ac2O gave I (R = Me3C, R1 = AcO).
IT 53307-91-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 53307-91-8 CAPLUS
CN Oxirane, 2,2'-[(1,4-dihydro-1,4-methanonaphthalene-5,8-diyl)bis(oxymethylene)]bis- (CA INDEX NAME)



L5 ANSWER 737 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1974:458143 CAPLUS
DN 81:58143
OREF 81:9214h,9215a
TI β-Adrenoceptor studies. 1. In vitro β-adrenergic blocking, antiarrhythmic, and local anesthetic activities of a new series of aromatic bis(2-hydroxy-3-isopropylaminopropyl) ethers
AU Zaagsma, J.; Nauta, W. Th.
CS Dep. Med. Chem., Vrije Univ., Amsterdam, Neth.
SO Journal of Medicinal Chemistry (1974), 17(5), 507-13
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
AB Ten title compds., prepared by the etherification of the appropriate dihydroxyarene with epichlorohydrin [106-89-8], followed by amination with isopropylamine [75-31-0], were tested in vitro for β-adrenergic blocking activity, antagonism of arrhythmia, and anesthetic activity. None of the compds. were more active than propranolol (I) [525-66-6]. The naphthyl diethers had more antiarrhythmic and anesthetic activity than the phenyl diethers. The relation of activity to structure and partition coefficient was discussed.
IT 27610-47-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(amination of)
RN 27610-47-5 CAPLUS
CN Oxirane, 2,2'-[1,5-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



IT 34899-13-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 34899-13-3 CAPLUS
CN Oxirane, 2,2'-[1,4-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)

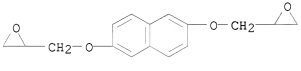


L5 ANSWER 738 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1972:34017 CAPLUS
DN 76:34017
OREF 76:5507a,5510a
TI 1,1'-(Naphthylenedioxy)bis-[3-(isopropylamino)-2-propanol]dihydrochlorides and tetrahydronaphthylenedioxy analogs
IN Nauta, Wijbe T.

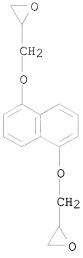
PA N. V. Koninklijke Pharmaceutische Fabrieken voorheen Brocades-Stheeman en Pharmacia
SO Ger. Offen., 23 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2114019	A	19711104	DE 1971-2114019	19710323
	GB 1307903	A	19730221	GB 1970-14345	19700324
	BE 764721	A1	19710923	BE 1971-101319	19710323
	NL 7103907	A	19710928	NL 1971-3907	19710323
	FR 2085739	A1	19711231	FR 1971-10436	19710324
	FR 2085739	A5	19711231		
PRAI	GB 1970-14345	A	19700324		
	GB 1970-14347	A	19700324		

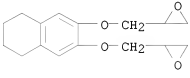
AB Seven title compds. (iso-PrNHCH2CH(OH)-CH2O)2X.2HCl (I) (X=5,6,7,8-tetrahydro-2,3-naphthylene, 1,8-, 1,2-, 1,4-, 1,5-, and 2,6-naphthylene) with antiarrhythmic, β-sympatholytic, and local anesthetic activity were prepared e.g. from (ClCH2CH(OH)CH2O)2X (II) and excess iso-PrNH2 (III) in a sealed tube or from the corresponding 1,1'-(naphthylenedioxy)bis(2,3-epoxypropane) (IV) and III. II and IV were prepared by reaction of X(OH)2 with epichlorohydrin in the presence of NaOH or piperidine under N. Thus, aqueous NaOH was added to a solution of 1,8-dihydroxynaphthalene in epichlorohydrin under N and the mixture stirred 16 hr at 80° and 24 hr at 100° to give 1,1'-(naphthylene-1,8-dioxy)bis(2,3-epoxypropane) which was heated with III in C6H6 20 hr at 80° and subsequently treated with HCl to give I (X=1,8-naphthylene).
IT 7327-24-4P 27610-47-5P 34898-93-6P 34898-97-0P 34899-01-9P 34899-05-3P 34899-09-7P 34899-13-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 7327-24-4 CAPLUS
CN Oxirane, 2,2'-[2,6-naphthalenediylbis(oxymethylene)]bis- (CA INDEX NAME)



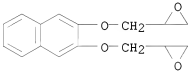
RN 27610-47-5 CAPLUS
CN Oxirane, 2,2'-[1,5-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



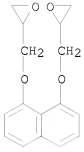
RN 34898-93-6 CAPLUS
CN Oxirane, 2,2'-[(5,6,7,8-tetrahydro-2,3-naphthalenediyl)bis(oxymethylene)]bis- (CA INDEX NAME)



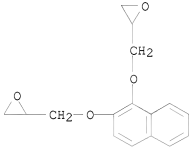
RN 34898-97-0 CAPLUS
CN Oxirane, 2,2'-[2,3-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



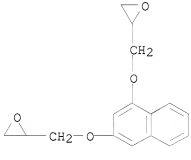
RN 34899-01-9 CAPLUS
CN Oxirane, 2,2'-[1,8-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



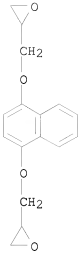
RN 34899-05-3 CAPLUS
CN Oxirane, 2,2'-[1,2-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 34899-09-7 CAPLUS
CN Oxirane, 2,2'-[1,3-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



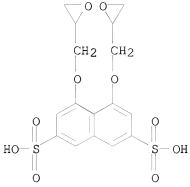
RN 34899-13-3 CAPLUS
CN Oxirane, 2,2'-[1,4-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



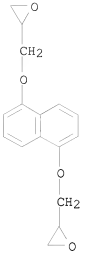
L5 ANSWER 739 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1970:121344 CAPLUS
DN 72:121344
OREF 72:21807a,21810a
TI Water-soluble epoxy compounds
IN Yoshida, Toshio; Nishi, Eijiro; Takenaka, Toshio
PA Taoka Dyestuff Manufg. Co., Ltd.
SO Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 45004742	B4	19700217	JP	19650901

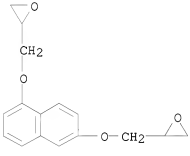
GI For diagram(s), see printed CA Issue.
AB The title compds. (I) were prepared Thus, 110 g 97% H2SO4 was gradually added to 98 g molten PhOH at 40° with stirring and the mixture heated to 100° in 1 hr, stirred 1 hr at the same temperature, 200 g ice added, the mixt neutralized with 20% NaOH, 400 g epichlorohydrin added at 40-50°, the solution heated to 70° in 1 hr, 220 g 20% NaOH added, and the solution stirred 2 hr at 90-100° to give 400 g Na glycidyloxybenzene-sulfonate. Similarly were prepared the glycidyl ethers of Na 1-hydroxy-2-chloro-4-benzenesulfonate, Na 4-tert-butyl-2-hydroxy-2-benzenesulfonate, and 2-hydroxy-3,6-naphthalenedisulfonate, and the bis(glycidyl ethers) of resorcinol monosulfonate and 1,8-dihydroxy-3,6-naphthalenedisulfonate.
IT 26564-67-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 26564-67-0 CAPLUS
CN 2,7-Naphthalenedisulfonic acid, 4,5-bis(2-oxiranylmethoxy)- (CA INDEX NAME)



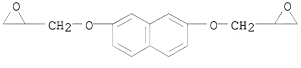
L5 ANSWER 740 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1970:56177 CAPLUS
DN 72:56177
OREF 72:10305a,10308a
TI Thermal analysis of nitro-substituted epoxide polymers
AU Fleming, Gerald J.
CS U. S. Nav. Ordnance Lab., Silver Spring, MD, USA
SO Journal of Applied Polymer Science (1969), 13(12), 2579-92
CODEN: JAPNAB; ISSN: 0021-8995
DT Journal
LA English
AB The thermal properties of a number of nitro-substituted and analogous non-nitrosubstituted epoxide polymers were studied. Dramatic increases in char yield and decreases in maximum rate of weight loss were observed for the nitrosubstituted systems compared to their non-nitrated analogs. These effects were enhanced when highly functional and highly aromatic epoxide resins were used. The sample size and heating rate employed had pronounced effects upon the amount of char formed during thermal degradation. Anal. of char residues indicates ring formation for the nitro-substituted systems during pyrolysis.
IT 27610-47-5P 27610-48-6P 27610-49-7P
RL: PREP (Preparation)
(cured by nitro compds., char yield and thermal properties of)
RN 27610-47-5 CAPLUS
CN Oxirane, 2,2'-[1,5-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 27610-48-6 CAPLUS
CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis- (CA INDEX NAME)



RN 27610-49-7 CAPLUS
CN Oxirane, 2,2'-[2,7-naphthalenediylbis(oxymethylene)]bis- (CA INDEX NAME)



L5 ANSWER 741 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1969:4955 CAPLUS
DN 70:4955
OREF 70:961a,964a
TI Polycyclic epoxides and resins produced therefrom
IN Starcher, Paul S.; Tinsley, Samuel W.; Ash, Bertrand D.
PA Union Carbide Corp.
SO U.S., 12 pp.

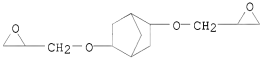
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3404102	A	19681001	US 1964-358607	19640409
PRAI US 1964-358607		19640409		

AB Epoxide monomers and resins, with the monomer containing 2-4 epoxy groups in saturated aliphatic substituents bonded through oxy, carbonyloxy, oxyalkylene, or carbonyloxyalkylene groups to a bicyclo[2.2.1]heptyl ring or a larger fused homocarbocyclic ring, useful as clear coatings and laminants, are provided. Thus, to a mixture of 1160 g. allyl alc. and 20.8 g. BF3, heated at 75° was added 920 g. bicyclo[2.2.1]hepta-2,5-diene, the mixture refluxed 11 hrs., the catalyst neutralized with 70 g. anhydrous NaOAc, and the mixture distilled to give bicyclo[2.2.1]hepta-5-en-2-yl allyl ether, the corresponding morticyclyl allyl ether, and 284 g. of a mixture of 2,5- and 2,6-bis(allyloxy)bicyclo[2.2.1]heptane (I), b. at 77°, nD30 1.4719-1.4750. To 416 g. I was added dropwise 1622 g. 22.5% HClO4 in EtOAc at 55° and after 10 hrs. the mixture codistd. with EtPh to remove HOAc and EtOAc and fractionated to give the corresponding monoepoxide and 319 g. mixture of 2,5- and 2,6-bis(2,3-epoxypropoxy)bicyclo[2.2.1]heptane (II), b0.05 140°, ηD30 1.4858. II (16.9 g.) and 3.1 g. diethylenetriamine (III) were kept 18 hrs. at room temperature to form a hard resinous product which was placed in a 50° oven fitted with a sun lamp., with the sample 5 in. from the sun lamp. After 2 days, the sample had changed from Gardner color 1 to 1+, while a conventional epoxy resin system prepared from bisphenol A and III changed from 3 to 5. Similarly, mixts. consisting of 2,5- and 2,6-bis(3,4-epoxybutyryloxy)bicyclo[2.2.1]heptane, b0.2 165-75°, nD30 1.4830-1.4842; 2,5-and 2,6-bis(3,4-epoxycyclohexylmethoxy)bicyclo[2.2.1]heptane; 2,5- and 2,6-bis(3,4-epoxycyclohexylcarbonyloxy)bicyclo[2.2.1]-heptane; 3,8- and 3,9-bis(2,3-epoxypropoxy)tricyclo[5.2.1.02,6]decane; 3,9- and 3,10-bis(2,3-epoxypropoxy)pentacyclo[10.2.1.18,11.-05,13.07,12]pentadecane; and 4,11- and 4,12-bis(2,3-epoxypropoxymethyl)pentacyclo[6.6.1.02,709,14]pentadecane were prepared

IT 19249-26-4 22590-53-0
RL: USES (Uses)
(epoxy resins from)

RN 19249-26-4 CAPLUS
CN Oxirane, 2,2'-[bicyclo[2.2.1]heptane-2,5-diylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 22590-53-0 CAPLUS
CN Norbornane, 2,6-bis(2,3-epoxypropoxy)- (8CI) (CA INDEX NAME)

IT 22590-59-6P 22590-60-9P
RL: PREP (Preparation)
(preparation of)
RN 22590-59-6 CAPLUS
CN 4,7-Methanoindan, 1,5-bis(2,3-epoxypropoxy)hexahydro- (8CI) (CA INDEX NAME)

RN 22590-60-9 CAPLUS
CN 4,7-Methanoindan, 1,6-bis(2,3-epoxypropoxy)hexahydro- (8CI) (CA INDEX NAME)

L5 ANSWER 742 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1968:60218 CAPLUS
DN 68:60218
OREF 68:11662h,11663a
TI Curable compositions from epoxy compounds and hardeners
IN Dissen, Israel J.
PA Velsicol Chemical Corp.
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3366602	A	19680130	US 1965-453506	19650505
PRAI US 1965-453506		19650505		

GI For diagram(s), see printed CA Issue.
AB 5,8-Bis(2,3-epoxypropoxy)-1,2,3,4,9,9-hexachloro-1,4-dihydro-1,4-methanonaphthalene (I) was prepared by treating a hexachlorocyclopentadiene (II)-benzoquinone (III) adduct with epichlorohydrin (IV). I was also prepared by converting the adduct to 5,8-dihydroxy-1,2,3,4,9,9-hexachloro-1,4-dihydro-1,4-methanonaphthalene (V) and then treating V with IV. I was cured with a polyamine or a mixture of a polycarboxylic anhydride and a polyol to produce a self-extinguishing molding resin. Thus, 214 g. II and 82.6 g. III were heated at

130-60° for 15 min. and the hot reaction mixture was poured into a chilled beaker and quenched with C6H14. The precipitate was recrystd. from a C6H6-C6H14 mixture to yield the adduct as a yellow solid, m. 184°. A mixture of 38.1 g. II-III adduct, 92.5 g. IV, and 0.5 ml. H2O was treated with 9.0 g. NaOH pellets while keeping the temperature at 60-70°. The excess IV was stripped off under vacuum to a pot temperature of 70°. The residue was extracted with boiling C6H14 to yield I, m. 95-7°. Alternatively, 2.0 g. adduct was dissolved in MeOH containing 5 drops pyridine and refluxed for 0.5 hr. A few drops of H2SO4 was added and the solution was evaporated to half its volume H2O was added to precipitate V, m. 184-6° (MeOH).

A mixture of 38.1 g. V, 1.0 mole IV, and 0.5 ml. H2O was treated with 8.2 g. NaOH while the temperature was kept at 60-5°. After 20 min. at 80°, excess IV was stripped off under vacuum at ≤80° and the residue was extracted with hot C6H14 to yield I. A mixture of I 24.4, chlorendic anhydride 14.7, and trimethylolpropane 0.9 g. was heated at 120° until a clear solution was obtained. The mixture was then poured into a preheated mold and heated for 1 hr. at 120°, 2 hrs. at 150°, and 16 hrs. at 180°. The molded resin was self-extinguishing. Similar compns. were prepared by using phthalic anhydride and ethylene glycol, pyromellitic anhydride and hexane-1,4-diol, dodecenylsuccinic anhydride and 1,3-propylene glycol, m-phenylenediamine, ethylenediamine, 1,6-diaminohexane, diethylenetriamine, or m-xylylenediamine as the curing agent.

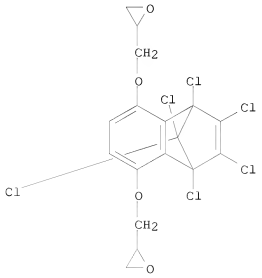
IT 30108-80-6 30111-36-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking of, with m-phenylenediamine)

RN 30108-80-6 CAPLUS

CN 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-, polymers (8CI) (CA INDEX NAME)

CM 1

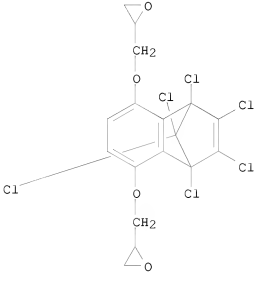
CRN 6019-59-6
CMF C17 H12 C16 O4



RN 30111-36-5 CAPLUS
CN Phenol, 4,4'-isopropylidenedi-, polymer with 1-chloro-2,3-epoxypropane and 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-1,4-methanonaphthalene (8CI) (CA INDEX NAME)

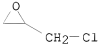
CM 1

CRN 6019-59-6
CMF C17 H12 Cl6 O4



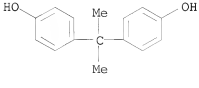
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

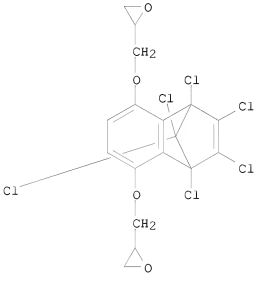
CRN 80-05-7
CMF C15 H16 O2



IT 30111-35-4P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of)
RN 30111-35-4 CAPLUS
CN 5-Norbornene-2,3-dicarboxylic anhydride, 1,4,5,6,7,7-hexachloro-, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-1,4-methanonaphthalene (8CI) (CA INDEX NAME)

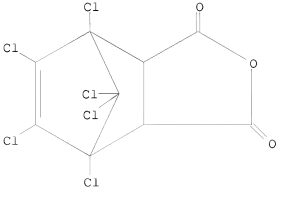
CM 1

CRN 6019-59-6
CMF C17 H12 C16 O4



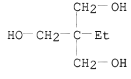
CM 2

CRN 115-27-5
CMF C9 H2 C16 O3

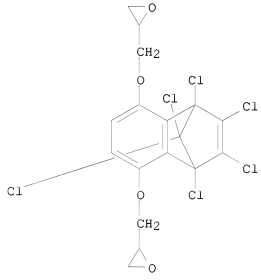


CM 3

CRN 77-99-6
CMF C6 H14 O3



IT 6019-59-6P
RL: PREP (Preparation)
(preparation of)
RN 6019-59-6 CAPLUS
CN 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro- (7CI, 8CI) (CA INDEX NAME)



L5 ANSWER 743 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1967:454780 CAPLUS
DN 67:54780
OREF 67:10335a,10338a
TI Epoxide compositions cured with 1,4-bis(amino-methyl)cyclohexane
IN Lee, Henry Lawrence
PA Epoxylite Corp.
SO U.S., 6 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

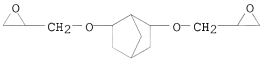
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3327016		19670620	US 1964-381925	19640121

AB Polyepoxide compns. are cured by 1,4-bis(aminomethyl)cyclohexane to form products which do not discolor when exposed to uv. The products are useful for aircraft and missile glazing, adhesives, and casting resins for dental products such as jacket crowns and dentures. Thus, 10 parts com. bisphenol A diglycidyl ether (180 epoxy equivalent weight) was mixed with 2 parts 1,4-bis(aminomethyl)cyclohexane at room temperature After 30 min. at room temperature, the mixture had cured to form a clear solid product. The product was postcured an addnl. 30 min. at 250°F. There was no color change. The postcured resin was exposed to uv, using the ASTM 620-57T test. After 24 hrs. exposure, there was no color shift compared with other amine curing agents, resins containing which became markedly discolored when exposed to the same test. The amines were ethylenediamine, diethylenetriamine, triethylenetetramine, diethylaminopropylamine, 1,4-diaminocyclohexane, hydroxypropylethylenediamine, menthanediamine, and m-xylylenediamine. Polyepoxides similarly tested were 1,4-endomethylene-2,6-cyclohexanediol, 2,2-bis(4-[2-chloromethyl-2-(2,3-epoxypropoxy)ethoxy]cyclohexyl)propane, and 2,2-bis[4-(2,3-epoxypropoxy)cyclohexyl]propane.

IT 17629-66-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking by, of epoxy resins)

RN 17629-66-2 CAPLUS

CN Norbornane, 2,6-bis(2,3-epoxypropoxy)-, endo- (8CI) (CA INDEX NAME)



L5 ANSWER 744 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1966:75707 CAPLUS

DN 64:75707

OREF 64:14167g-h,14168a-b

TI Reaction of epichlorohydrin with hexachlorocyclopentadiene-benzoquinone adduct

IN Dissen, Israel J.

PA Velsicol Chemical Corp.

SO 4 pp.

DT Patent

LA Unavailable

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3235569		19660215	US 1961-134816	19610830
PRAI	US		19610830		

GI For diagram(s), see printed CA Issue.

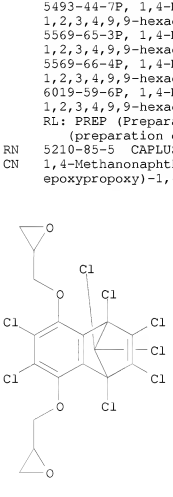
AB A mixture of 214 g. hexachlorocyclopentadiene and 82.6 g. benzoquinone was heated 15 min. at 130-60°, the hot mixture poured into a chilled

beaker, and quenched with hexane to give the title adduct (I), m. 184° (C6H6-hexane). A mixture of 38.1 g. I, 92.5 g. epichlorohydrin (II), and 0.5 ml. H2O was heated with stirring while NaOH was added. When the temperature reached 65°, the reaction became exothermic. The temperature was kept at 60-70° until 9 g. NaOH was added, the excess I removed in vacuo to pot temperature 70°, and the residue extracted with hot hexane to give 5,8-bis(epoxypropoxy)-1,2,3,4,9,9 -hexachloro - 1,4 - dihydro-1,4-methanonaphthalene (III), m. 95-7°. A solution of 2 g. I in MeOH containing 5 drops C5H5N refluxed 0.5 hr. (decolorized in .apprx.20 min.), treated with a few drops H2SO4, evaporated to 1/2 volume, then treated with H2O gave 5,8-dihydroxy-1,2,3,4,9,9-hexachloro-1,4-dihydro-1,4-methanonaphthalene (IV), m. 184-6°. A stirred mixture of 38.1 g. IV, 1 mole II, and 0.5 ml. H2O treated with 8.2 g. NaOH (in 6 portions) during 1.5 hrs. at 60-5°, the mixture heated 20 min. at 80°, excess II removed in vacuo <80°, and the residue extracted with hot hexane gave III, m. 95-7°. The compds. can be cured with carboxylic acids or anhydrides, polyols, or polyfunctional amines to give resins. Examples illustrating the manner in which the compds. were polymerized to form hard, infusible resins, which were self-extinguishing when withdrawn from a free flame, are given.

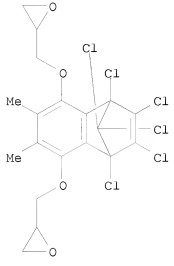
IT 5210-85-5P, 1,4-Methanonaphthalene, 1,2,3,4,6,7,9,9-octachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro- 5493-44-7P, 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-6,7-dimethyl- 5569-65-3P, 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-6-methyl- 5569-66-4P, 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-6-phenyl- 6019-59-6P, 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro- RL: PREP (Preparation) (preparation of)

RN 5210-85-5 CAPLUS

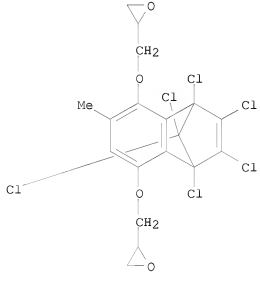
CN 1,4-Methanonaphthalene, 1,2,3,4,6,7,9,9-octachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro- (7CI, 8CI) (CA INDEX NAME)



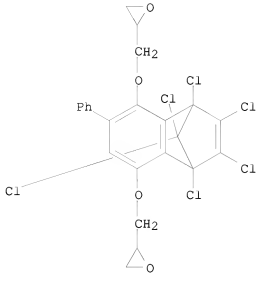
RN 5493-44-7 CAPLUS
CN 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-6,7-dimethyl- (7CI, 8CI) (CA INDEX NAME)



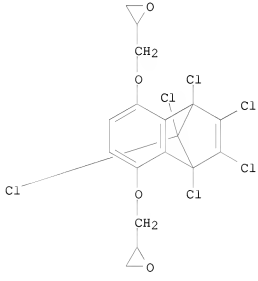
RN 5569-65-3 CAPLUS
CN 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-6-methyl- (7CI, 8CI) (CA INDEX NAME)



RN 5569-66-4 CAPLUS
CN 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-6-phenyl- (7CI, 8CI) (CA INDEX NAME)



RN 6019-59-6 CAPLUS
CN 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro- (7CI, 8CI) (CA INDEX NAME)



L5 ANSWER 745 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1966:68554 CAPLUS
DN 64:68554
OREF 64:12871h,12872a
TI Dyeable, elastic, linear polyesters for films, fibers, and threads
PA Farbwerke Hoechst A.-G.
SO 14 pp.
DT Patent

LA Unavailable
FAN.CNT 1

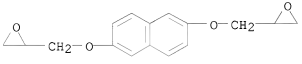
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 652507		19650301	BE 1965-2507	19640831
	FR 1409986			FR	
PRAI	DE		19630829		

AB The title products, which are stretchable and have improved dyeability and elasticity, such as films, threads, or fibers, are obtained by polycondensation of hydroxyalkyl diesters of aromatic dicarboxylic acids in the presence of 0.1-1% diglycidyl compds. (I) free of basic N and having a low vapor pressure at the polycondensation temperature For example, 500 g. di-Me terephthalate was trans-esterified under N with 400 g. ethylene glycol in the presence of 0.1 g. Zn(OAc)3 and 0.1 g. Sb2O2. After removal of excess glycol by vacuum distillation, 1.0 g. of the diglycidyl ether of 4,4'-dihydroxybiphenyl was added to the molten mass with stirring. In 120 min., an almost colorless mass (relative viscosity 1.840, m. 258.5°) was obtained, which was pressed into cold water under low-pressure N. This polyester was spun at 294° into filaments, which were stretched in a 1:4.6 ratio at 80° to give filaments 4.2 g./denier, elongation 32.6%, elasticity 91% at 40 and 85% at 42 kg./mm.2 The modified filaments shrank 14% in air heated to 200° and 8% in boiling H2O, in the latter case with considerable curling.

IT 7327-24-4, Naphthalene, 2,6-bis(2,3-epoxypropoxy)-
(poly(ethylene terephthalate) modified by)

RN 7327-24-4 CAPLUS

CN Oxirane, 2,2'-[2,6-naphthalenediylbis(oxymethylene)]bis- (CA INDEX NAME)



L5 ANSWER 746 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1962:475868 CAPLUS
DN 57:75868
OREF 57:15073g-i,15074a-c
TI Glycidyl ethers
PA CIBA Ltd.
SO 23 pp.
DT Patent
LA Unavailable

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	BE 610419		19620516	BE	
	CH 393296			CH	
	GB 982151			GB	
PRAI	CH		19601117		

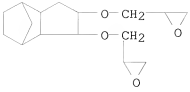
AB To a mixture of 1000 parts C6H6 and 300 parts 8 (or 9)-hydroxy-8,9-dihydrodicyclopentadiene (I) (prepared from cyclopentadiene (II) and H2O) is added 20 parts of anhydrous AcONa with stirring. Over a period of 1 hr. 420 parts of 42% peracetic acid is added. The temperature of

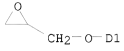
the mixture is kept at 30° by cooling. After 2 more hrs. at 30° the C6H6 solution is washed with H2O and 2N Na2CO3 until acid free. The solution is dried over anhydrous Na2SO4, filtered, and evaporated Vacuum distillation of the residue yields 3,4-epoxy-8(or 9)-hydroxytetrahydrodicyclopentadiene (III), b0.01 120°. To a mixture of 83 parts III and 500 parts H2O I part by volume of 48% BF3 in Et2O is added and the mixture stirred 8.5 hrs. at 75. The solution is extracted with 200 parts Et2O. The aqueous phase is slowly percolated through a 20 g. Dowex 1-X8 ion-exchange column in the base form. The neutral solution is evaporated under vacuum. The residue is vacuum distilled to yield 58 parts 3,4,8(or 9)trihydroxytetrahydrodicyclopentadiene (IV), b0.2 200° (approx.). To 100 parts by volume anhydrous dioxane containing 18.4 parts IV is added 0.4 parts by volume 48% BF3 in Et2O. Epi- chlorohydrin (V) (27.8 parts) is added dropwise with stirring at 70-80°. The solution is cooled and at room temperature 12 parts ground NaOH are added in small portions. After 1/2; hr. the solution is filtered and evaporated The residue is dissolved in 100 parts by volume C6M6, washed with 20 parts by volume M NaH2PO4, dried over anhydrous Na2SO4, filtered, and evaporated The clear liquid residue contains 4.55 equivs. epoxide per kg. and is essentially the triglycidyl ether of IV. A diglycidyl ether (VI) derived from II is prepared thus. Tech. diepoxide of II (328 parts) in 400 parts by volume MeOH is shaken in the presence of 20 g. Raney Ni first at 100° and then at 150° under 80 to 120 atmospheric H pressure until no addnl. H is absorbed. The catalyst is removed by filtration and the solvent by evaporation Vacuum distillation of the residue yields 240 parts 3(or 4), 8(or 9)-dihydroxytetrahydrodicyclopentadiene, b0.01-0.12 152-6°. The latter is treated with V as described to yield VI. To I (150 parts) in 150 parts of Me2CO is added 84 parts NaHCO3 in 850 parts H2O. The mixture is cooled to 10-15° and 64 parts Cl gas are bubbled into the mixture with stirring. The reaction mixture seps. into 2 phases. The lower phase contains the reaction product and small amts. Me2CO and H2O, which are removed by vacuum distillation The product is 4(or 3)-chloro-3(or 4), 8(or 9)-dihydroxytetrahydrodicyclopentadiene (VII). The diglycidyl ether is prepared from VII and V. Polymerization of these glycidyl ethers yields useful epoxy resins.

IT 98520-41-3P, 4,7-Methanoindan, 1,2,5(or 1,2,6)-tris(2,3-epoxypropoxy)hexahydro-
RL: PREP (Preparation)
(preparation of)

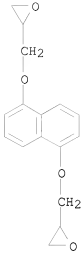
RN 98520-41-3 CAPLUS

CN Oxirane, 2,2',2''-[[octahydro-4,7-methano-1H-indene-1,2,5(or 1,2,6)-triyl]tris(oxymethylene)]tris- (9CI) (CA INDEX NAME)

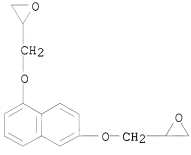




L5 ANSWER 747 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1961:11119 CAPLUS
DN 55:11119
OREF 55:2166g-i,2167a
TI Correlation between structure and thermal stability of epoxy resins
AU Ehlers, Gerhard F. L.
CS Wright Patterson Air Force Base, OH
SO Polymer (1960), 1, 304-314
CODEN: POLMAG; ISSN: 0032-3861
DT Journal
LA Unavailable
AB Thermal stability of cured epoxy resins was investigated in terms of weight loss and Vicat heat distortion temperature Resins used were: 1,1,3,3-tetrakis(p-glycidyloxyphenyl) ethane, 3,4-epoxy-6-methylcyclohexylmethyl 3,4-epoxy-6-methylcyclohexanecarboxylate, and the diglycidyl ethers of the following 6 phenols: Bisphenol A, 1,5- and 1,6-naphthalenediol, 3,3'- and 4,4'-dihydroxybiphenyl, and 4,4'-dihydroxydiphenyl sulfone. The Bisphenol A resin had an epoxy equivalent of 470. Amines, phenols, anhydrides, and BF3-EtNH2 were employed as curing agents. In one series α-pinene oxide, dipentene oxide, and allyl glycidyl ether were used as reactive diluents. The amines, phenols, and anhydrides (in order of descending Vicat temperature measured) were: 4,4'-diaminodiphenyl sulfone, benzidine, 2,4,6-triaminotoluene, N,N-diallylmelamine, 3,3'-diaminodiphenyl sulfone, m- and p-phenylenediamine, diethylenetriamine, ethylenediamine; phloroglucinol, 1,1,2,2-tetrakis(p-hydroxyphenyl) ethane, 4,4'-dihydroxydiphenyl sulfone, 1,6-, 1,5-, and 2,7-naphthalenediol, resorcinol, hydroquinone; pyromellitic dianhydride, maleic, citraconic, hexahydrophthalic, phthalic, succinic, and chlorendic anhydrides. Anhydride-cured resins generally gave the highest Vicat temperature
IT 27610-47-5, Naphthalene, 1,5-bis(2,3-epoxypropoxy)-
27610-48-6, Naphthalene, 1,6-bis(2,3-epoxypropoxy)-
(epoxy resins containing, thermal stability of)
RN 27610-47-5 CAPLUS
CN Oxirane, 2,2'-[1,5-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 27610-48-6 CAPLUS
CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis- (CA INDEX NAME)



L5 ANSWER 748 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1957:45314 CAPLUS
DN 51:45314
OREF 51:8436c-e
TI Chemically modified cellulose
IN Doughty, Mark; Brown, Brindley J.
PA Fothergill and Harvey, Ltd.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 757386		19560919	GB 1953-7111	19530314

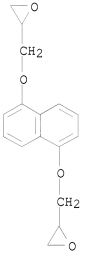
AB Cross linkages containing aromatic rings are used to modify cellulose. Cellulose is treated with a bis(glycidyl ether) of a polyhydroxyphenol, i.e. hydroquinone, resorcinol, phloroglucinol, dihydroxynaphthalene, in the presence of the hydroxide of an alkali metal and heated. For example, the mixed diastereoisomers of resorcinol bis(glycidyl ether) were prepared

by the reaction of resorcinal, epichlorohydrin, and NaOH. The bis-ether was purified by distillation and the middle fraction b2.5 182-9° was used for treatment of cellulose. Regenerated cellulose fibers (after treatment with 18% NaOH) were immersed in a 30% xylene solution of the resorcinol bis(glycidyl ether) and heated at 120° for 13 min. After washing, the resulting cellulose fibers were found to be insol. in cuprammonium hydroxide.

IT 27610-47-5P, Naphthalene, 1,5-bis(2,3-epoxypropoxy)-
RL: PREP (Preparation)
(manufacture and cellulose modification therewith)

RN 27610-47-5 CAPLUS

CN Oxirane, 2,2'-[1,5-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



L5 ANSWER 749 OF 749 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1954:13253 CAPLUS

DN 48:13253

OREF 48:2406h-i,2407a-b

TI Epoxy resins from bis-, tris-, and tetrakis-glycidyl ethers

AU Dearborn, Elizabeth C.; Fuoss, Raymond M.; MacKenzie, Alfred K.; Shepherd, Ridgley G., Jr.

CS United States Testing Co., Boston, MA

SO Journal of Industrial and Engineering Chemistry (Washington, D. C.) (1953), 45, 2715-21
CODEN: JIECAD; ISSN: 0095-9014

DT Journal

LA Unavailable

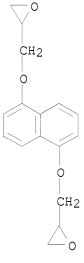
AB The reaction between polyglycidyl ethers and carboxylic acid anhydrides was studied by using the thermal yield point as the significant experimentally observed variable. The yield point increases with increasing anhydride content of the molding compound to a maximum which corresponds to a ratio of one mole of anhydride to one mole of epoxy oxygen. Maximum impact strength and min. heat loss likewise appear at this stoichiometrically critical composition Amines were found to accelerate the

reaction markedly. The following compns. are described, together with the synthesis of new intermediates: phthalic anhydride with the glycidyl ethers of 1,3,5-trihydroxybenzene, 2,2,5,5-tetrakis (4-hydroxyphenyl)hexane, 2,2,4,4-tetrakis(4-hydroxyphenyl)pentane, 2,2,3,3-tetrakis(4-hydroxyphenyl)butane, 2,2-bis(4-hyroxyphenyl)propane, tris(4-hydroxyphenyl)methane, 1,5-dihydroxynaphthalene, 1,3-dihydroxybenzene, and 1,4-dihydroxybenzene; Epon 834 (Shell Chemical Corp.) with phthalic, maleic, 4-cyclohexene-1,2-dicarboxylic, adipic poly-, dichlorophthalic, and 1,5-dimethyl-2,3,4,6,7,8-hexahydronaphthalene-3,4,7,8-tetracarboxylic anhydrides. Increasing the functionality of the glycidyl ether and (or) that of the anhydride increases the thermal yield point.

IT 27610-47-5P, Naphthalene, 1,5-bis(2,3-epoxypropoxy)-
RL: PREP (Preparation)
(preparation and reaction with anhydrides)

RN 27610-47-5 CAPLUS

CN Oxirane, 2,2'-[1,5-naphthalenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



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=> s l5 and curable
         56893 CURABLE
L6          86 L5 AND CURABLE

=> d 80-86 bib abs hitstr

L6   ANSWER 80 OF 86  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   1993:474679  CAPLUS
DN   119:74679
OREF 119:13441a,13444a
TI   Radiation-curable 1,1'-methylenebisnaphthalene derivatives
     containing (meth)acrylate groups
IN   Kinoshita, Masayuki; Ishikawa, Hidenori
PA   Dainippon Ink and Chemicals, Inc., Japan
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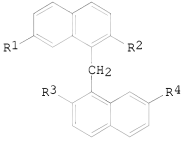
SO Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 04255710	A	19920910	JP 1991-17648	19910208
JP 3019429	B2	20000313		
PRAI JP 1991-17648		19910208		

GI



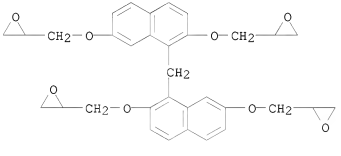
I

AB The title compds., prepared by reacting I (R1-4 = H, glycidyloxy; all of R1-4 can not be H simultaneously) with oxirane-reactive unsatd. compds. and polybasic anhydrides, are useful for coatings, inks, etc. Thus, reacting I (R1-4 = glycidyloxy) with acrylic acid, then reacting the resulting product with tetrahydrophthalic anhydride gave a product, which gave a UV-cured coating with good heat, water, and alkali resistance.

IT 146794-56-1DP, acrylates, reaction products with tetrahydrophthalic anhydride, polymers
RL: PREP (Preparation)
(preparation of photocured, heat-, water- and alkali-resistant)

RN 146794-56-1 CAPLUS

CN Oxirane, 2,2',2'',2'''-[methylenebis[1,2,7-naphthalenetriylbis(oxymethylene)]]tetrakis- (CA INDEX NAME)



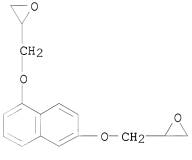
L6 ANSWER 81 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1993:410121 CAPLUS

DN 119:10121
OREF 119:2029a,2032a
TI Soldering heat-resistant epoxy resin potting compositions for surface mounting of semiconductor devices
IN Honda, Shiro; Teshiba, Toshihiro; Tanaka, Masayuki
PA Toray Industries, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04325517	A	19921113	JP 1991-97619	19910426
	JP 2501143	B2	19960529		
PRAI	JP 1991-97619		19910426		

OS MARPAT 119:10121
AB The title compns. comprise (A) main resin part containing the bifunctional biphenyl- and/or naphthalene-based epoxy resins, (B) crosslinkers which are essentially phenol-aralkyl resins, and (C) inorg. fillers containing the 97-60:3-40 mixture of crushed fumed silica (a) with particle size (s) ≤10 μm and spherical fused silica (b) with s ≤4 μm (and must be smaller than that of a. A title composition was formulated from 4,4'-bis(2,3-epoxypropoxy)-3,3',5,5'-tetramethylbiphenyl 7.4, a hydroxyphenyl-terminated polyphenylenepoly-p-xylylene 8.3, a-type silica 76.0, b-type silica 4.0 parts, silane coupler and ordinary auxiliaries.
IT 27610-48-6
RL: USES (Uses)
(potting compns. curable with polyphenols, silica fillers in, for heat soldering heat resistance)
RN 27610-48-6 CAPLUS
CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis- (CA INDEX NAME)

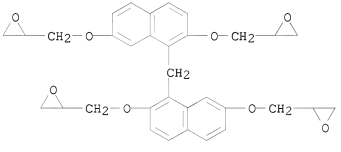


L6 ANSWER 82 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1993:170251 CAPLUS
DN 118:170251
OREF 118:29214h,29215a
TI Epoxy resin and its intermediates, manufacture, and compositions
IN Ogura, Ichiro; Ebara, Toshiharu; Kitamura, Taku; Sakata, Hiroshi
PA Dainippon Ink and Chemicals, Inc., Japan
SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 04217675	A	19920807	JP 1991-32765	19910227
	JP 3137202	B2	20010219		
	US 5302672	A	19940412	US 1992-841470	19920226
PRAI	JP 1990-292470	A1	19901030		
	JP 1990-323239	A1	19901128		
	JP 1991-32765	A	19910227		

AB 1,1-Bis(2,7-diglycidyloxy-1-naphthyl)methane prepared by reacting epichlorohydrin and 1,1-bis(2,7-dihydroxy-1-naphthyl)methane obtained in 100% yield from 2,7-dihydroxynaphthalene (I) and HCHO is curable with curing agents showing excellent heat and water resistance and toughness, especially suitable for semiconductor potting; similar results are obtained when I is used together with β-naphthol.
IT 146794-56-1P
RL: PREP (Preparation)
(epoxy resin intermediates, manufacture of)
RN 146794-56-1 CAPLUS
CN Oxirane, 2,2',2'',2'''-[methylenebis[1,2,7-naphthalenetriylbis(oxymethylene)]]tetrakis- (CA INDEX NAME)



L6 ANSWER 83 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1992:153197 CAPLUS
DN 116:153197
OREF 116:25941a,25944a
TI Low-temperature-curable polymaleimide compositions
IN Shinohara, Norio; Otani, Kazuo; Hanyuda, Toshiaki
PA Showa Highpolymer Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

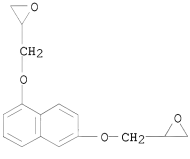
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03258819	A	19911119	JP 1990-54941	19900308
	JP 06078411	B	19941005		
PRAI	JP 1990-54941		19900308		

AB The title compns. giving cured products with excellent toughness contain compds. having ≥1 maleimide group in mol. and compds. having ≥2 vinylbenzyl ether groups linked to benzene or naphthalene nuclei [prepared by chain extending of polyvalent phenols or naphthols by (0.05-0.5):1 equiv epoxy resins (based on the phenols or naphthols)]. Thus, after 1.0 equiv 2-methylhydroquinone was treated with 0.25 equiv bisphenol A epoxy resin (epoxy equiv 189) at 150° for .apprx.1 h in the presence of Et3N, a solution of 0.75 equiv KOH and 0.75 equiv chloromethylstyrene in aqueous DMSO was added dropwise at 70-80° over 1 h and kept at 70-80° for addnl. 2 h to give a chain-extended methylhydroquinone benzyl ether (I) (viscosity 700 P/25°). A mixture of 100 parts I and 100 parts N,N'-diphenylmethanebis(maleimide) (II) showed gel time 3.5 min (120°). Then, the mixture was molded at 120° for 30 min and postcured at 250° for 5 h to give test specimens showing maximum deflection in bending test 4.0 mm at 23°, 5.4 mm at 270°, compared with 3.2 for specimens containing untreated methylhydroquinone divinylbenzyl ether instead of I.

IT 27610-48-6D, reaction product with dihydroxynaphthalene and chloromethylstyrene
RL: MOA (Modifier or additive use); USES (Uses)
(crosslinking agents, for polymaleimides, low-temperature-curable, for good toughness)

RN 27610-48-6 CAPLUS

CN Oxirane, 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis- (CA INDEX NAME)



L6 ANSWER 84 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1989:515914 CAPLUS

DN 111:115914

OREF 111:19447a,19450a

TI Light- and electron beam-curable phenanthrene (meth)acrylates

IN Sugiura, Michio; Kato, Yuzo

PA Nippon Steel Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

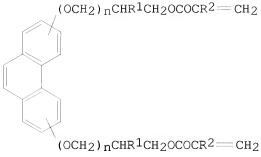
DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 01075447	A	19890322	JP 1987-234140	19870918
PRAI	JP 1987-234140		19870918		

GI



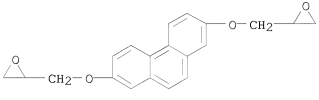
I

AB The title (meth)acrylates I (R1 = OH, OCOCR2:CH2; R2 = H, Me; n ≥1) give cured products with good hardness, adhesion, and heat resistance and are useful for coatings, inks, adhesives, etc. Thus, 2,7-bis(1,2-epoxypropoxy)phenanathrene, prepared from phenanthrene in 4 steps, was refluxed with methacrylic acid in benzene in the presence of Et3N to give 80% 2,7-I (R1 = OH, R2 = Me, n = 1), which was treated with methacryloyl chloride in benzene to give 70% 2,7-I (R1 = OCOCMe:CH2, R2 = Me, n = 1) (II). II containing 30% poly(vinylpyrrolidone) and 3% Merck 1173-Irgacure 651 (1/4) mixture was applied on an Al plate and irradiated by UV to form a coating with crosscut adhesion 97/100, vs. 28/100 using Viscoat 540 instead of II.

IT 119864-55-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with (meth)acrylic acid)

RN 119864-55-0 CAPLUS

CN Oxirane, 2,2'-[2,7-phenanthrenediylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



L6 ANSWER 85 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1989:155003 CAPLUS

DN 110:155003

OREF 110:25655a,25658a

TI 6,6'-Dihydroxy-3,3,3',3'-tetramethyl-1,1'-spirobiindan diglycidyl ether and its manufacture

IN Tanabe, Yoshimitsu; Uragami, Tatsunobu; Yamaguchi, Keisaburo; Yamaguchi, Teruhiro

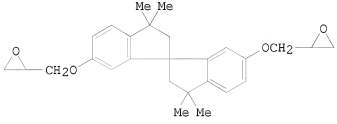
PA Mitsui Toatsu Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 63150270	A	19880622	JP 1986-294991	19861212
	JP 07080862	B	19950830		
PRAI	JP 1986-294991		19861212		

GI



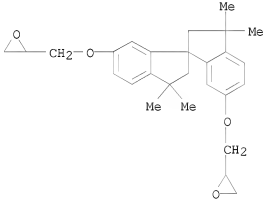
I

AB Title compound (I) is prepared by treating 6,6'-dihydroxy-3,3,3',3'-tetramethyl-1,1'-spirobiindan (II) with epihalohydrin in the presence of a dehydrohalogenation agent. I cured with 17.2 phr Epicure Z and heated in a mold at 80° for 2 h and then at 150° for 2 h showed heat distortion temperature 160.5°, water absorption 0.51%, flexural strength 5.5 kgf/mm 2, flexural modulus 316 kgf/mm2, and d. 1.154 g/cm2.

IT 120004-95-7P
RL: PREP (Preparation)
(preparation of, as curable resins)

RN 120004-95-7 CAPLUS

CN Oxirane, 2,2'-[(2,2',3,3'-tetrahydro-3,3,3',3'-tetramethyl-1,1'-spirobi[1H-indene]-6,6'-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



L6 ANSWER 86 OF 86 CAPLUS COPYRIGHT 2008 ACS on STN

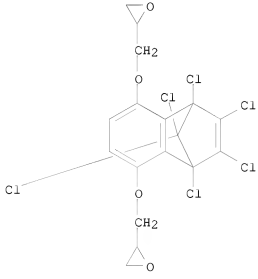
AN 1968:60218 CAPLUS
DN 68:60218
OREF 68:11662h,11663a
TI Curable compositions from epoxy compounds and hardeners
IN Dissen, Israel J.
PA Velsicol Chemical Corp.
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 3366602	A	19680130	US 1965-453506	19650505
PRAI US 1965-453506		19650505		

GI For diagram(s), see printed CA Issue.
AB 5,8-Bis(2,3-epoxypropoxy)-1,2,3,4,9,9-hexachloro-1,4-dihydro-1,4-methanonaphthalene (I) was prepared by treating a hexachlorocyclopentadiene (II)-benzoquinone (III) adduct with epichlorohydrin (IV). I was also prepared by converting the adduct to 5,8-dihydroxy-1,2,3,4,9,9-hexachloro-1,4-dihydro-1,4-methanonaphthalene (V) and then treating V with IV. I was cured with a polyamine or a mixture of a polycarboxylic anhydride and a polyol to produce a self-extinguishing molding resin. Thus, 214 g. II and 82.6 g. III were heated at 130-60° for 15 min. and the hot reaction mixture was poured into a chilled beaker and quenched with C6H14. The precipitate was recrystd. from a C6H6-C6H14 mixture to yield the adduct as a yellow solid, m. 184°. A mixture of 38.1 g. II-III adduct, 92.5 g. IV, and 0.5 ml. H2O was treated with 9.0 g. NaOH pellets while keeping the temperature at 60-70°. The excess IV was stripped off under vacuum to a pot temperature of 70°. The residue was extracted with boiling C6H14 to yield I, m. 95-7°. Alternatively, 2.0 g. adduct was dissolved in MeOH containing 5 drops pyridine and refluxed for 0.5 hr. A few drops of H2SO4 was added and the solution was evaporated to half its volume H2O was added to precipitate V, m. 184-6° (MeOH).
A mixture of 38.1 g. V, 1.0 mole IV, and 0.5 ml. H2O was treated with 8.2 g. NaOH while the temperature was kept at 60-5°. After 20 min. at 80°, excess IV was stripped off under vacuum at ≤80° and the residue was extracted with hot C6H14 to yield I. A mixture of I 24.4, chlorendic anhydride 14.7, and trimethylolpropane 0.9 g. was heated at 120° until a clear solution was obtained. The mixture was then poured into a preheated mold and heated for 1 hr. at 120°, 2 hrs. at 150°, and 16 hrs. at 180°. The molded resin was self-extinguishing. Similar compns. were prepared by using phthalic anhydride and ethylene glycol, pyromellitic anhydride and hexane-1,4-diol, dodecenylsuccinic anhydride and 1,3-propylene glycol, m-phenylenediamine, ethylenediamine, 1,6-diaminohexane, diethylenetriamine, or m-xylylenediamine as the curing agent.
IT 30108-80-6 30111-36-5
RL: RCT (Reactant); RACT (Reactant or reagent)
(crosslinking of, with m-phenylenediamine)
RN 30108-80-6 CAPLUS
CN 1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-, polymers (8CI) (CA INDEX NAME)

CM 1

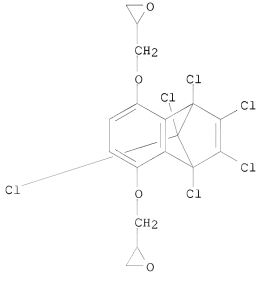
CRN 6019-59-6
CMF C17 H12 C16 O4



RN 30111-36-5 CAPLUS
CN Phenol, 4,4'-isopropylidenedi-, polymer with 1-chloro-2,3-epoxypropane and 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-1,4-methanonaphthalene (8CI) (CA INDEX NAME)

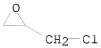
CM 1

CRN 6019-59-6
CMF C17 H12 C16 O4



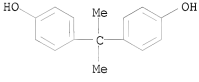
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

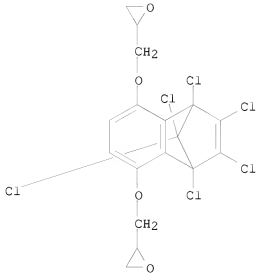
CRN 80-05-7
CMF C15 H16 O2



IT 30111-35-4P
RL: IMF (Industrial manufacture); PREP (Preparation)
(manufacture of)
RN 30111-35-4 CAPLUS
CN 5-Norbornene-2,3-dicarboxylic anhydride, 1,4,5,6,7,7-hexachloro-, polymer with 2-ethyl-2-(hydroxymethyl)-1,3-propanediol and 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-1,4-dihydro-1,4-methanonaphthalene (8CI) (CA INDEX NAME)

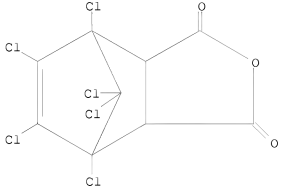
CM 1

CRN 6019-59-6
CMF C17 H12 Cl6 O4



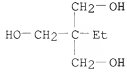
CM 2

CRN 115-27-5
CMF C9 H2 C16 O3



CM 3

CRN 77-99-6
CMF C6 H14 O3



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IT   6019-59-6P
     RL: PREP (Preparation)
        (preparation of)
RN   6019-59-6  CAPLUS
CN   1,4-Methanonaphthalene, 1,2,3,4,9,9-hexachloro-5,8-bis(2,3-epoxypropoxy)-
     1,4-dihydro- (7CI, 8CI)  (CA INDEX NAME)
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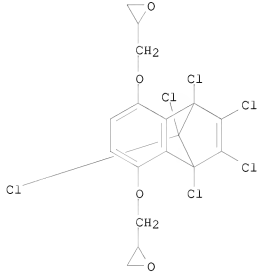


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=> s l6 and norbornane
          2835 NORBORNANE
L7           1 L6 AND NORBORNANE

=> d bib abs hitstr

L7   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2004:1154689  CAPLUS
DN   142:75740
TI   Curable polycyclic compounds and process for the production
     thereof
IN   Takenaka, Junji; Yamamoto, Hiromasa; Tanaka, Kenji
PA   Tokuyama Corporation, Japan
SO   PCT Int. Appl., 88 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
     --------------      ----   --------    -------------------    --------
PI   WO 2004113313        A1    20041229    WO 2004-JP8959         20040618
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO,
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NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

	JP 2005146253	A	20050609	JP 2004-180123	20040617
	EP 1637526	A1	20060322	EP 2004-746428	20040618
	R: DE, ES, FR, GB, IT				
	CN 1809548	A	20060726	CN 2004-80017325	20040618
	US 20060252911	A1	20061109	US 2005-560794	20051215
PRAI	JP 2003-175754	A	20030620		
	JP 2003-324162	A	20030917		
	JP 2003-324268	A	20030917		
	JP 2003-358270	A	20031017		
	JP 2003-359205	A	20031020		
	WO 2004-JP8959	W	20040618		

OS MARPAT 142:75740

AB Polycyclic compds. such as derivs. of adamantanes and norbornanes having terminal glycidyl groups and oxetanylmethyloxy groups are prepared and cured. Thus, 1,3-adamantanediol reacted with 3-ethyl-3-p-toluenesulfonyloxymethyloxetane to give 1,3-bis[(3-ethyloxetan-3-yl)methoxy]adamantane which was hardened with 3-methylhexahydrophthalic anhydride.

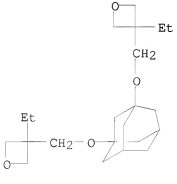
IT 815642-84-3P
RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(curable polycyclic compds. having terminal glycidyl groups and oxetanylmethyloxy groups)

RN 815642-84-3 CAPLUS

CN 1,3-Isobenzofurandione, hexahydro-, polymer with 2,2'-[bicyclo[2.2.1]heptane-2,5-diylbis(oxymethylene)]bis[oxirane] and 3,3'-[tricyclo[3.3.1.13,7]decane-1,3-diylbis(oxymethylene)]bis[3-ethyloxetane] (9CI) (CA INDEX NAME)

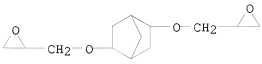
CM 1

CRN 815642-16-1
CMF C22 H36 O4



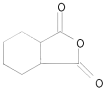
CM 2

CRN 19249-26-4
CMF C13 H20 O4



CM 3

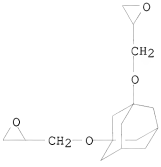
CRN 85-42-7
CMF C8 H10 O3



IT 815642-63-8P 815642-65-0P 815642-67-2P
815642-69-4P 815642-71-8P 815642-79-6P
815642-82-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable polycyclic compds. having terminal glycidyl groups and oxetanylmethyloxy groups)
RN 815642-63-8 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[tricyclo[3.3.1.13,7]decane-1,3-diylbis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 815642-24-1
CMF C16 H24 O4



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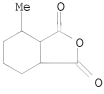
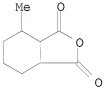
CRN 57110-29-9
CMF C9 H12 O3



RN 815642-65-0 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[bicyclo[2.2.1]heptane-2,5-diylbis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

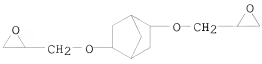
CM 1

CRN 57110-29-9
CMF C9 H12 O3



CM 2

CRN 19249-26-4
CMF C13 H20 O4



RN 815642-67-2 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[(5,7-dimethyltricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

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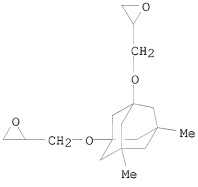
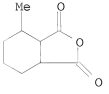
CRN 815642-27-4
CMF C18 H28 O4



CM 2

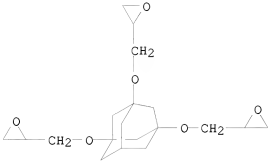
CRN 57110-29-9
CMF C9 H12 O3



RN 815642-69-4 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2',2''-[tricyclo[3.3.1.13,7]decane-1,3,5-triyltris(oxymethylene)]tris[oxirane] (9CI) (CA INDEX NAME)

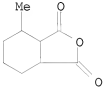
CM 1

CRN 815642-29-6
CMF C19 H28 O6



CM 2

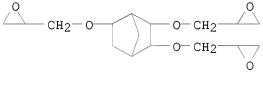
CRN 57110-29-9
CMF C9 H12 O3



RN 815642-71-8 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2',2''-[bicyclo[2.2.1]heptane-2,3,5-triyltris(oxymethylene)]tris[oxirane] (9CI) (CA INDEX NAME)

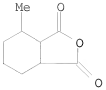
CM 1

CRN 815642-32-1
CMF C16 H24 O6



CM 2

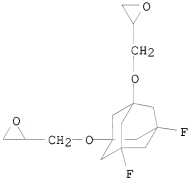
CRN 57110-29-9
CMF C9 H12 O3



RN 815642-79-6 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[(5,7-difluorotricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

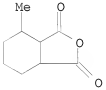
CM 1

CRN 815642-46-7
CMF C16 H22 F2 O4



CM 2

CRN 57110-29-9
CMF C9 H12 O3



RN 815642-82-1 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[(5-butyltricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

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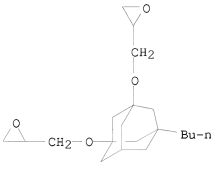
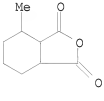
CRN 815642-81-0
CMF C20 H32 O4

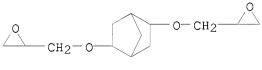


CM 2

CRN 57110-29-9
CMF C9 H12 O3



IT 19249-26-4P 815642-24-1P 815642-27-4P
815642-29-6P 815642-32-1P 815642-46-7P
815642-52-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(curable polycyclic compds. having terminal glycidyl groups and oxetanylmethyloxy groups)
RN 19249-26-4 CAPLUS
CN Oxirane, 2,2'-[bicyclo[2.2.1]heptane-2,5-diylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 815642-24-1 CAPLUS
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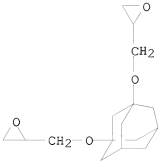
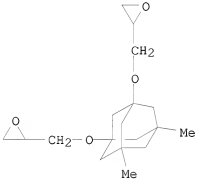


RN 815642-27-4 CAPLUS
CN Oxirane, 2,2'-[(5,7-dimethyltricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis- (CA INDEX NAME)



RN 815642-29-6 CAPLUS
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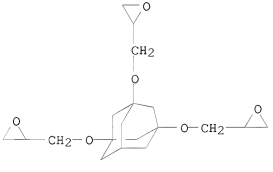
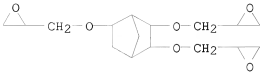
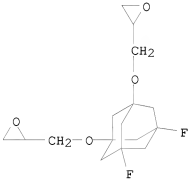


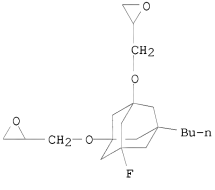
RN 815642-32-1 CAPLUS
CN Oxirane, 2,2',2''-[bicyclo[2.2.1]heptane-2,3,5-triyltris(oxymethylene)]tris- (9CI) (CA INDEX NAME)



RN 815642-46-7 CAPLUS
CN Oxirane, 2,2'-[(5,7-difluorotricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 815642-52-5 CAPLUS
CN Oxirane, 2,2'-[(5-butyl-7-fluorotricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s l5 and norbornane
2835 NORBORNANE
L8 2 L5 AND NORBORNANE

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=> d 1-2 bib abs hitstr

L8   ANSWER 1 OF 2  CAPLUS  COPYRIGHT 2008 ACS on STN
AN   2004:1154689  CAPLUS
DN   142:75740
TI   Curable polycyclic compounds and process for the production thereof
IN   Takenaka, Junji; Yamamoto, Hiromasa; Tanaka, Kenji
PA   Tokuyama Corporation, Japan
SO   PCT Int. Appl., 88 pp.
     CODEN: PIXXD2
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.          KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2004113313        A1    20041229    WO 2004-JP8959         20040618
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK,
             LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO,
             NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ,
             TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     JP 2005146253         A      20050609    JP 2004-180123         20040617
     EP 1637526            A1     20060322    EP 2004-746428         20040618
         R:  DE, ES, FR, GB, IT
     CN 1809548            A      20060726    CN 2004-80017325       20040618
     US 20060252911        A1     20061109    US 2005-560794         20051215
PRAI JP 2003-175754        A      20030620
     JP 2003-324162        A      20030917
     JP 2003-324268        A      20030917
     JP 2003-358270        A      20031017
     JP 2003-359205        A      20031020
     WO 2004-JP8959        W      20040618
OS   MARPAT 142:75740
AB   Polycyclic compds. such as derivs. of adamantanes and norbornanes having
     terminal glycidyl groups and oxetanylmethyloxy groups are prepared and
     cured.  Thus, 1,3-adamantanediol reacted with
     3-ethyl-3-p-toluenesulfonyloxymethyloxetane to give
     1,3-bis[(3-ethyloxetan-3-yl)methoxy]adamantane which was hardened with
     3-methylhexahydrophthalic anhydride.
IT   815642-84-3P
     RL: IMF (Industrial manufacture); PRP (Properties); RCT (Reactant); TEM
     (Technical or engineered material use); PREP (Preparation); RACT (Reactant
     or reagent); USES (Uses)
        (curable polycyclic compds. having terminal glycidyl groups and
        oxetanylmethyloxy groups)
RN   815642-84-3  CAPLUS
CN   1,3-Isobenzofurandione, hexahydro-, polymer with
     2,2'-[bicyclo[2.2.1]heptane-2,5-diylbis(oxymethylene)]bis[oxirane] and
     3,3'-[tricyclo[3.3.1.13,7]decane-1,3-diylbis(oxymethylene)]bis[3-
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ethyloxetane] (9CI) (CA INDEX NAME)

CM 1

CRN 815642-16-1
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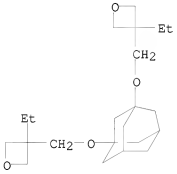
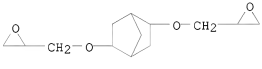


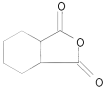
CM 2

CRN 19249-26-4
CMF C13 H20 O4



CM 3

CRN 85-42-7
CMF C8 H10 O3



IT 815642-63-8P 815642-65-0P 815642-67-2P
815642-69-4P 815642-71-8P 815642-79-6P
815642-82-1P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(curable polycyclic compds. having terminal glycidyl groups and

oxetanylmethyloxy groups)

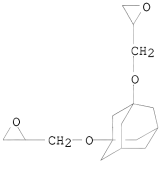
RN 815642-63-8 CAPLUS

CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[tricyclo[3.3.1.13,7]decane-1,3-diylbis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 815642-24-1

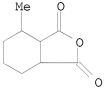
CMF C16 H24 O4



CM 2

CRN 57110-29-9

CMF C9 H12 O3



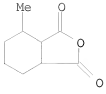
RN 815642-65-0 CAPLUS

CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[bicyclo[2.2.1]heptane-2,5-diylbis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

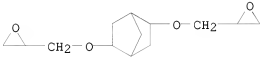
CRN 57110-29-9

CMF C9 H12 O3



CM 2

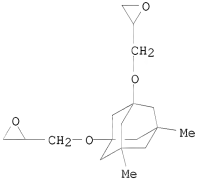
CRN 19249-26-4
CMF C13 H20 O4



RN 815642-67-2 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[(5,7-dimethyltricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

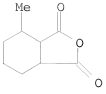
CM 1

CRN 815642-27-4
CMF C18 H28 O4



CM 2

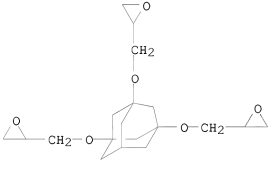
CRN 57110-29-9
CMF C9 H12 O3



RN 815642-69-4 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2',2''-[tricyclo[3.3.1.13,7]decane-1,3,5-triyltris(oxymethylene)]tris[oxirane] (9CI) (CA INDEX NAME)

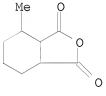
CM 1

CRN 815642-29-6
CMF C19 H28 O6



CM 2

CRN 57110-29-9
CMF C9 H12 O3

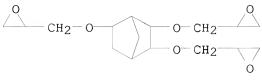


RN 815642-71-8 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2',2''-[bicyclo[2.2.1]heptane-2,3,5-triyltris(oxymethylene)]tris[oxirane] (9CI) (CA INDEX NAME)

CM 1

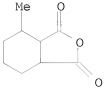
CRN 815642-32-1

CMF C16 H24 O6



CM 2

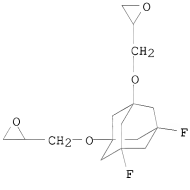
CRN 57110-29-9
CMF C9 H12 O3



RN 815642-79-6 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[(5,7-difluorotricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

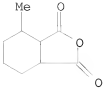
CM 1

CRN 815642-46-7
CMF C16 H22 F2 O4



CM 2

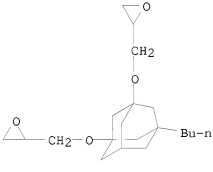
CRN 57110-29-9
CMF C9 H12 O3



RN 815642-82-1 CAPLUS
CN 1,3-Isobenzofurandione, hexahydro-4-methyl-, polymer with 2,2'-[(5-butyltricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

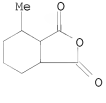
CM 1

CRN 815642-81-0
CMF C20 H32 O4



CM 2

CRN 57110-29-9
CMF C9 H12 O3

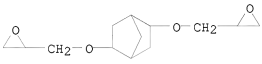


IT 19249-26-4P 815642-24-1P 815642-27-4P
815642-29-6P 815642-32-1P 815642-46-7P
815642-52-5P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(curable polycyclic compds. having terminal glycidyl groups and

oxetanylmethyloxy groups)

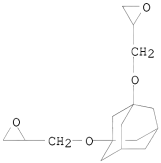
RN 19249-26-4 CAPLUS

CN Oxirane, 2,2'-[bicyclo[2.2.1]heptane-2,5-diylbis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



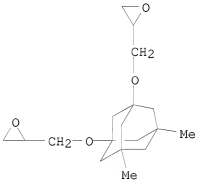
RN 815642-24-1 CAPLUS

CN Oxirane, 2,2'-[tricyclo[3.3.1.13,7]decane-1,3-diylbis(oxymethylene)]bis- (CA INDEX NAME)



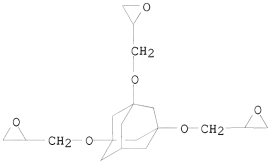
RN 815642-27-4 CAPLUS

CN Oxirane, 2,2'-[(5,7-dimethyltricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis- (CA INDEX NAME)

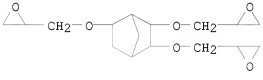


RN 815642-29-6 CAPLUS

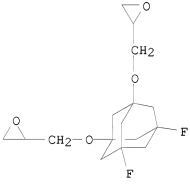
CN Oxirane, 2,2',2''-[tricyclo[3.3.1.13,7]decane-1,3,5-triyltris(oxymethylene)]tris- (CA INDEX NAME)



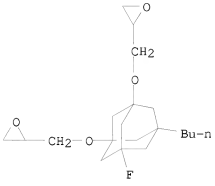
RN 815642-32-1 CAPLUS
CN Oxirane, 2,2',2''-[bicyclo[2.2.1]heptane-2,3,5-triyltris(oxymethylene)]tris- (9CI) (CA INDEX NAME)



RN 815642-46-7 CAPLUS
CN Oxirane, 2,2'-[(5,7-difluorotricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)



RN 815642-52-5 CAPLUS
CN Oxirane, 2,2'-[(5-butyl-7-fluorotricyclo[3.3.1.13,7]decane-1,3-diyl)bis(oxymethylene)]bis- (9CI) (CA INDEX NAME)

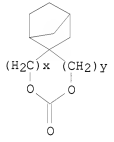


RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1998:435987 CAPLUS
DN 129:109731
OREF 129:22539a,22542a
TI Norbornane cyclic carbonate-containing epoxy resin compositions and their cured products with dimensional stability
IN Murayama, Mitsumoto; Mita, Fumio; Endo, Takeshi
PA Sumitomo Bakelite Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10182812	A	19980707	JP 1996-344284	19961224
PRAI JP 1996-344284		19961224		

OS MARPAT 129:109731
GI



I

AB The compns. comprise norbornane cyclic carbonates I (x, y = 0-3), epoxy resins, and amine-based anionic ring-opening polymerization initiators. Thus, a cured product from a composition containing I (x, y = 1) 30,

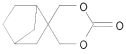
YX 4000H 68, and DBU 2 parts showed tensile shear strength >5 kg/mm2, thermal expansion coefficient 9.0 + 10-5 degree-1, volume expansion rate 1.0%, and 10% weight reduction temperature 330°.

IT 210046-16-5P 210046-19-8P
RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(norbornane cyclic carbonate-containing epoxy resin compns. to give cured products with dimensional stability and no shrinkage)

RN 210046-16-5 CAPLUS
CN Spiro[bicyclo[2.2.1]heptane-2,5'-[1,3]dioxan]-2'-one, polymer with 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

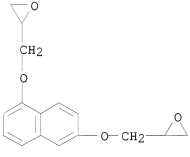
CM 1

CRN 198197-09-0
CMF C10 H14 O3



CM 2

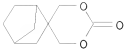
CRN 27610-48-6
CMF C16 H16 O4



RN 210046-19-8 CAPLUS
CN Spiro[bicyclo[2.2.1]hept-5-ene-2,5'-[1,3]dioxan]-2'-one, polymer with 2,2'-[1,6-naphthalenediylbis(oxymethylene)]bis[oxirane], spiro[bicyclo[2.2.1]heptane-2,5'-[1,3]dioxan]-2'-one and 2,2'-[(3,3',5,5'-tetramethyl[1,1'-biphenyl]-4,4'-diyl)bis(oxymethylene)]bis[oxirane] (9CI) (CA INDEX NAME)

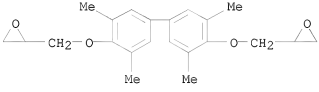
CM 1

CRN 198197-09-0
CMF C10 H14 O3



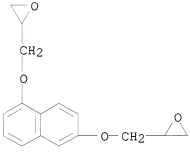
CM 2

CRN 85954-11-6
CMF C22 H26 O4



CM 3

CRN 27610-48-6
CMF C16 H16 O4



CM 4

CRN 7363-94-2
CMF C10 H12 O3